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FINIS.



THE  
WHOLE ART OF  
HUSBANDRY  
CONTAINED IN  
FOVRE BOOKES.

*Viz.*

- I. Of the Farme or Manssion House, Offices and accom-  
modations of Earable gound, Pasture and Medowe.
- II. Of Gardens, Orchards, and Woods.
- III. Of Breeding, Feeding, and Curing of all manner of  
Cattell.
- IIII. Of Poultrie, Fowle, Fish, and Bees, with the whole  
art (according to these last times) of Breeding and  
dycing the Fighting Cock, and the art of Angling,

First written by *Comrade Herebitch*, a learned Nobleman, then  
translated by *Barnaby Googe* Esquire, and now Renewed, Cor-  
rected, enlarged, and adorned with all the experiments and  
practises of our English Nation, which were wanting in the  
Former Editions.

---

By Captaine *Gervase Markham*.

---

All the new Additions you shall finde to begin with this marke ♣ and to end  
with this \*.

*Gratum Opus Agricolis.*

---

LONDON,

Printed by T. C. for *Richard More*, and are to be sold at his shop in S.  
Dunstons Church-yard in Fleetstreet. 1631.

THE UNIVERSITY OF CHICAGO

TO THE PRESIDENT OF THE UNIVERSITY OF CHICAGO  
FROM THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES

RESOLUTION  
ADOPTED BY THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES  
AT A MEETING HELD ON MAY 10, 1954  
IN THE AUDITORIUM OF THE UNIVERSITY OF CHICAGO

WHEREAS the Faculty of the Division of the Physical Sciences  
has considered the report of the Committee on the  
Organization of the Division of the Physical Sciences  
and has approved the recommendations of the Committee  
and has decided to implement the same

IT IS RESOLVED THAT the Faculty of the Division of the Physical Sciences  
do hereby approve the report of the Committee on the  
Organization of the Division of the Physical Sciences  
and do hereby implement the same



TO  
THE RIGHT  
HONORABLE WILLIAM

Cicell Earle of Exceter, Baron of  
Burley, Knight of the noble Order of  
the Garter, one of his Maiesties most  
Honorable privie Counsaile, and  
Lord Lievtenant of the Pro-  
vince of Northampton.

SIR.



*Y Name, my Birth, my Selse,  
are not utter strangers to your  
Honor for the first you support;  
the second you did love, and the  
last you did once write your  
Seruant. I now desire to kisse  
your hand in this dedication.*

*The worke was first gathered by a Noble Counsellor  
to the Duke of Cleve, and taught to speake English by  
a learned Gentleman Master Googe, who was so  
faithfull to the first Author that it became an utter*

## The Epistle Dedicatory.

stranger to our Climate: and how ever Italy, France, Spaine, Rome, and Naples got from it much perfection, yet our colder Ayre was not capable of the benefites; Which to repaire, I have undertaken in this worke to insert, mixe and reconcile together those Foraine knowledges with our owne practisises and experiments, whersby it may be made both to us and to them equally fruitfull. This I desire may kisse your Noble hand, not as bringing you matter hid from your knowledge, but as a witnesse of my Service and an humble suite for safety in your protection. Which granted, I shall ever rest

Your honors humble seruant  
Gervase Markham.

---

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The first Booke of Husbandry  
Entreating of Earable ground,  
Tillage, and Pasture.

Rigo. Como.

Rigo. After Gono, I am glad I have found you in the midst of your country pleasures: surely you are a happier man, than trifling your selfe with the formalities of the Court, can packe out so quiet a life, and giving what all can receive life in the pleasant Countrey, far, feeling no in the meanest time to be lost with the cares and business

of the common locale.

R I C O. Tell me I beseech you, how you bestow your time, and how you are occupied all the day, for I doubt not but you doe as much as in you lieth to spend the time as profitably as you may.

660. I will tell you, and not deny it, if you will  
give me the hearing: and to begin, I will use the words and

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# The first Booke of Husbandry:

Entreating of Earable-ground,

Tillage, and Pasture.

Rigo. Cono.

Rigo.



After Cono. I am glad I have found you in the midst of your country pleasures: Surely you are a happie man, that missing your selfe of the tumults of the Court, can picke out so quiet a life, and seeing what all can become of him in the pleasant Countie, sit, seeing as in the meane time to be lost with the cares and businesse

of the common world.

Cono. Surely I must confesse I have taken a strange way if these goods of the Country would direct me to enjoy such happinesse.

Rigo. Tell me I beseech you, how you bestow your time, and how you are occupied all the day, for I doubt not but you doe as much as in you lieth to spend the time as profitably as you may.

Cono. I will tell you, and not dissemble, if you will give me the hearing: and to begin, I will use the words and

## The first Booke, entreating

verses to the Poet, though in other his writings scarce be-  
met, yet in this speaking very grave and wise.

First served on knees the Majesty divine,

My servants next and ground I overlooke :

To every man his taske I doe assigne,

When this is done, I get me to my booke.

I use commonly to rise first of all my selfe, specially in  
Summer, when we loose the healthfullest and sweetest time  
with sluggishnesse. Aristotle accounteth early rising the best,  
both for health, wealth, and study. In the winter if I be loath  
to rise, if either the unreasonable of the weather, or sick-  
nesse cause me to keepe my bed, I commit all to my steward,  
whose faith and diligence I am sure of, whom I have so well  
instructed, that I may safely make him my deputie : I have  
also Eurichia my maid, so skilfull in huswifery, that she may  
well be my wifes suffragan, these twaine we appoint to sup-  
ply our places : but if the weather and time serve, I play the  
housemaster my selfe. And though I have a waylife as  
skilfull as may be, yet remembering the old saying, that the  
best doing so; the field is the Masters seat, and the best pro-  
vender so; the horse the Masters eye, I play the overseer my  
selfe. That it is wholesome to rise early, I am perswaded  
both by the counsell of the most grave Philosophers, and by  
mine owne experience. When my servants are all set to  
worke, and every man as busie as may be, I get me into my  
closet to seeke God, and to reade the holy Scriptures: (for this  
order I alwayes keepe, to appoint my selfe every day my  
taske, in reading some part either of the old Testament, or  
of the new; that done, I write or read such things as I thinke  
most needfull, or dispatch what businesse so ever I have in my  
house, or with friends abroad. A little before dinner I walke a-  
bout, if it be faire, either in my garden, or in the fields ; if it  
be foule, in my gallerie ; when I come in, I find an egge, a  
chicke, a peece of kid, or a peece of veale, fish, butter, and such  
like, as my foldes, my garde, or my dairie and sheepcotes will  
yield : sometime a fallow, or such fruits as the garden or or-  
chard doth beare : which viuals without any charges my  
wife

The best  
doing for  
ground is  
the masters  
foot.

## of Earable-ground and Tillage.

§

wise provideth me, wherewith I content my selfe as well, as if I had the daintiest dish in Europe: I never lightly sit about one houre at my meate: after dinner I passe the time with talking with my wife, my servants, or if I have any, with my guests: I rise and walke about my ground, where I view my workemen, my Pastures, my Peddolves, my Corne, and my Cattell. When I am in the Countrey I goe every day, if the weather be good, and no other great businesse about my grounds: if not every day, at the least once in two or three dayes: as often as I come to the Citie from the Countrey, I doe the like, to understand how my ground is husbanded, and what is done, what undone: neither do I ever goe about it, but some good cometh of my travaile. In the meane while I behold the wonderfull wisdom of Nature, and the incomprehensible working of the most mighty God in his creatures, which, as Cicero truly affirmeth, is the delicatest food of the soule, and the thing that maketh us come nearest unto God. Here walke I with my selfe, the benefits and wonderfull workes of God, who bringeth forth grasse for the Cattell, and greene herbe for the use of man, that he may bring food out of the earth, according to the Psalm.

Academ.  
quest. lib 1.

Psal. 104.

For what workman is there in the world, that is able to frame or counterfeite such heavenly workes? Who could of a slender grasse make Wheat or Bread, and of a tender twigge bring forth so notable a liquor as Wine? but onely the mighty Lord that created all things visible and invisible: With these sights do I recreate my minde, and give thanks unto God the Creator and conservator of all things, for his great and exceeding goodness, I sing the song, To thee, O Lord, belongeth praises in Zion, or, Praise thou the Lord O my soule, &c. beseeching God to blesse the gifts that he hath given us, through his bounteous liberality, to enrich the fieldes, and to prosper the Corne and the Grasse, and that he will crowne the earth with his plentifulnesse, that we may enjoy the fruits of the earth with thanksgiving, to the honour of him, and the profit of our neighbours. When returning home, I go to writing or reading, or such other businesse as I have: but with study, or invention, I never meddle in three houres after I have dined. I suppe with a small pit-

tance, and after supper I either selldome or neuer write or reade, but rather passe the time seeing my sheepe come home from the field, and my Oxen dragging home the plow with weary neckes, in beholding the pleasant pastures sweetly smelling about my house, and my herds of cattell toying hard by mee: sometime I list to rest me under an old helme, sometime upon the greene grasse: in the meane time passeth by me the pleasant river, the streames falling from the springs with a comfortable noise: or else walking by the river side, or in my garden, or nearest pastures, I confer with my wife or servants of husbandry, appointing what I will have done: if my Bailiffe have any thing to say, if any thing be to be bought or sold: so a good husband, as Cato saith, must rather bee a seller than a buyer. Sometimes (specially in winter) after supper, I make my Minister to tell something out of the holy Scripture, or else some pleasant story, so that it be honest and goodly, and such as may edifie. Two or three hours after supper I get me to bed, and commonly as I said before, the last in the house, except my Chamberlaine and my Steward.

A good husband must rather be a seller then a buyer,

**R I G G.** In the meane time being farre from the Church, neither can you heare the Sermons, nor bee present with your wife and your household at service: for your owne part, though ye may supply the matter with reading, yet your wife and your servants cannot so doe.

**C A T O.** For my part (without daunt be it spoken,) I have service every day at certaine appointed houres, where preacheth to me daily the prophets, the Apostles, Basil, Chrysostome, Nazianzen, Cyril, Cyprian, Ambrose, Austen, and other excellent preachers, whom I am sure, I heare with greater profit, than if I should heare you or Iohn lack Lattines, and foolish fellows in your Church. My wife also being given to reading, readeth the Bible, & certaine Psalmes, translated into our owne tongue: if there be anything too hard or backe for her, I make her to understand it: besides, she hath private prayers of her owne that she doeth: in the meane time I have one, that upon the holidayers (if the weather or our businesse be such as we cannot goe to Church) readeth the Gospel, toucheth the Catechisme, and

mini,

## of Earable ground and Tillage.

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ministereth the Sacraments when time requires: but in the Sommer time, if the weather be not unreasonable, we goe alwayes vpon the Sundayes and festiuall dayes to our Parish Church, where we heare our Curate, and receiue the blessed Communion: as for my household, I bring them to this order, that they alwayes serue God before their going to worke, and at their coming to meales. It is written of Anthonie the Ermitte, that being demanded of a certaine Philosopher how he could in the solitarie wildecnesse without any booke, occupie himselfe in the studie of Diuinitie: he answered, that the whole world serued him for booke, as a well furnished Library: in which he alwayes read the wonderfull workmanship of God, which in euery place stood before his eyes. In the like sort haue I my household seruants well instructed in the chiefe grounds of true Religion, who leaning to their vocation and innocencie of their life, not carried away with the vaine entisements and pleasures of Citties, do behold the Maiestie of God in his workes, and honor the Creatour in his Creatures, not onely vpon Sundayes, but euery day in the yeere, where they may also heare the little birds, and other creatures in their kindes, setting out the glory and Maiestie of God.

The saying  
of Saint  
Anthony.

R I G O. You saide to tell me of a Schale of Diuinity, & not of a Husbandmans cottage: this was the very order of the Patriarkes, and the monasteries in the Primitive Church.

C O N O. I n d e e d Chrysostome would haue all Christians, married folkes and vnmarrried, to leade their lines according to the rule and order of Monkes: but of such Monkes as liued in those dayes, not such good-felloves as ours be now: so the profession of a Monke in that age, was no other but the life of the purest and perfectest Christians, which kinde of life the olde Patriarkes, as the Scriptures doe witnesse, did leade.

Homil. 96.  
upon the 16  
of Mar. and  
in other  
places.

But to returne to my quietnes, or my Husbandry, from whence I digressed: do you yet maruaile how I can delight my selfe with this so honest and profitable a quietnes, then which in the iudgement of the holiest & wisest men, there is nothing more honest nor better, neither is there besides any trade of life more meet for a Gentleman, nor frauaile more acceptable to



The com-  
mendation  
of Husban-  
dry.

Emperours  
and Kings  
professors of  
Husbandry

Serranus,

Cincinatus

God, then is the tilling of the ground. The people in the old time (as Caro, a man of great wisdom, and a teacher of husbandry both witnesseth) as oft as they would give a man the name of an honest man, they would call him a good husband, comprehending in that name as much commendation, as they could give him: besides, most mightie Kings and Emperours were no whit ashamed to professe this trade, as Xenophon reporteth of King Cyrus: the like writeth Quintus Curtius of Abdolominus. Numa the King of the Romans bare a singular affection to husbandry, so; that hee thought there was no kind of life so fit to maintaine either peace or warres, or so; the provision of a mans life, being rather a giuer of good life, then riches. Moreover, Hiero, Philometor, Attalus, Archilaus, and a great number of princes more, delighted with the profession of husbandry: this knowledge is also highly commended by Homer, the very fountaine in his time of wisdom, whereas he describeth Alcino the king of the Phaeaces, whose delight in the planting and pleasures of his orchards was wonderfull. And Laertes the old man, that with his continuall occupying of husbandry, brought his mind better to beare the absence of his son. Hesiodus in his worke *ἡ γῆ καὶ ἀνὴρ ἀεικλής* giveth great praise to Athens, that being banished the city, gave himselfe to the life of the countrie: yea, the ground hath before time bin tilled by the hands of Emperours, the Earth in the meane time, rising to be torne with a victors share, and to be plowed with the hands of a triumphant conquerer, either because they dealt with the like regard in their seed, as in their warres, or used such diligence in the come fields, as they did in the campe, or else because all things handled with honest and vertuous fingers prosper the better, being more carefully looked to. Serranus when he was called to honour, was found sowing of seed. The Dictators office was brought by the pusseiant to Cincinatus, being all naked and besmeared with sweat and dust. The pusseiants had first their name of calling Senators and Conerays out of the Counttie to the Citle. In like sort had this name at the first, the Fabij, the Pisons, the Curij, the Lentuli, the Cicerones, the Fulvii, and other ancient houses. Horace tel-  
leth,



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leth, that of husbandmen haue bene bzed the valiantest and  
 worthiest souldiers: affirming, that the hand that hath bene  
 bzed to the spade, proueth often of greatest value in the field.  
 Homer reporteth a great valiance in Vlisses his neat heard, in  
 the slaughter of those fellows that would haue raniſhed his mi-  
 streſſe. <sup>Husband-</sup> <sup>men come</sup> <sup>to be Em-</sup> <sup>perours.</sup> ~~Post~~ certaine it is, that a great number of Emperours  
 haue sprung from the plow. And to let others goe, it is knowne  
 that the Emperours Galerius & Maximinus came both from poore  
 Heardmen to the imperiall dignitie. The like is written of Iu-  
 line, Constantianus, Probus, & Aurelianus. The stories report,  
 that M. Curius the Emperour was found in his house boyling of  
 a rape roste, when he refused the great sums of gold brought by  
 the Samnits Embassadors. What should I speake of the anti-  
 quitie of it: the holy Scriptures declare husbandry to be the an-  
 cientest of all trades; and to begin with the very beginning of  
 man, & that neither Osiris, nor Dionisius, were the first founders  
 of this knowledge, as the Paines fable, but that the most  
 mightie Lord himselfe did first ordaine it: for Adam and his sons  
 were all husbandmen, Noe was a planter of vines, Abraham,  
 Isaac, & Jacob, were shepherds, Saul from his Ases, & David from  
 his shep, were called to the crowne, Elizeus & Amos of shepherds  
 were made prophets, Ozias as we read, professed husbandry. Iesus  
 the sonne of Syrach commending husbandry above the rest, saith,  
 hee customably vsed himselfe to hold the plow, to drie the cart,  
 & to keepe cattell: but what need we more? Our Saviour Christ  
 himselfe glorieth to be the son of a husbandman, & frameth his  
 parables of planting of vines, of shep & shepheards: moreover,  
 as it is in Luke, our Lord seemeth to be a teacher of husbandry,  
 where he sheweth, that trees are to be digged about & dunged,  
 that they may prosper the better. For sith this knowledge is of  
 all other most innocent, and without which it is most plaine  
 we are not able to liue: the best men haue alwayes embraced  
 it, & the old Fathers haue euer counted it very Cosen German  
 to wisdom. Cicero calleth it the Mistress of Justice, diligence,  
 & chastities: some others call it the mother and nurse of all other  
 arts. For whereas we may liue without the other, without this  
 we are not able to sustaine our life: besides, the gaine that

The Antie  
 quity of  
 Husbandry.

The first  
 planter of  
 Vines.

Husbandry  
 the mother  
 and nurse of  
 all other  
 Arts.

The wor-  
thinesse of  
Husbandry.

hereof ariseth, is most goodly, and least subject to enuy, so; it hath to deale with the earth, that restor;eth with gaine such things as is committed vnto her, specially if it be furthered with the blessing of God. The onely gentlemanly way of encreasing the hou'e, is the trade of husbandry: and so; this cause they were alwayes accounted the perfectest Gentlemen, that, content with the liuing their Ancestors left them, liued in the Countrie of their Lands, not meddling with figgings, chopping, & chainging, nor seeking their liuing by handicrafts. M. Varro in his time, sayth, there was great complaint made, that the f;athers forsaking the Plough and the Sickle, began to crape into the Towne, and busied themselves rather with Pageants and Midsummer games, then with the Vineyard of the f;ield, whereas the Couernours of Rome so deuoted the yere, as they assigned onely the ninth day so; businesse of the Cittie, & the rest of the time so; the tillage of the Countrie, whereby being hardened with labor in peace, they might the better be able to abide the traualle of warres. Which countrie people were alwayes preferred before the people of the Citie, & more Nobility thought to be in them that till the ground abroad, then in those that liuing idely within the walles, spent their time vnder the shadow of the penthouse: except a man will, with the common sox, thinke it more honest to get his liuing with the blood & calamitie of poore soules, or not daring to deale with the sword, to make his gaine of merchandize, and being a creature of the land, contrary to his kinde, giue himselfe to the rage of the Seas, & the pleasure of the Windes, wandering like a bird, from shoure to shoure, & country to countrie; or to follow this goodly profession of bawling at a barre, & so; gaine to open his iawes at every bench. Surely, as I said before, this onely hath bene euer counted the innocentest trade of life of all men, and in all ages. By husbandry were made rich the goodly f;athers, Abraham, Lot, Iacob, and Iosab: & most certaine it is, that this profession & this gaine is most acceptable to God, when hee commanded Adam to till the ground, and to get his liuing with the sweat of his browes. Thus is husbandry of such authority, as God with his open witness hath allowed it, and afterwards by his servant Moses hath

Genes. 3.  
Husbandry  
pleasing to  
God.  
Leuit. 26.

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added his blessing vnto it, saying, I will giue the ground my blessing in the first yere, & it shall bring forth the fruits of three yeres. And againe, If you will keepe my commandements, I will send you raine in due season, & the earth shall yeld her increase, and your trees shall be loaden with fruit, the threshing time shall last till the vintage, and the vintage shall endure til the sowing time, & you shall eat your bread with plenteousnes. What can there be now more pleasant to a Christian man, than to get his liuing by such meanes as he knoweth doth please God, and to play the Philosopher in the most sweet contemplation of the benefits of God, and to acknowledge and reuerence the wisdom & power of the diuine Maiestie, and his bountifullnes to mankind, to giue thanks & prayse for his goodnesse: the very hearbes & creatures in the field in the meane time preach, ing vnto vs.

**R I C O.** You frame me here of a husbandman a Diuine, and almost bring me in minde to become a husbandman, who alwaies hitherto with the common sort, accounted this husbandry to be a beastly and beggarly occupation.

**C O N C.** What diuinitie there is in it, and what a field of the acknowledged benefits of God, you haue heard. That the common sort doe thinke it a beastly and beggerly kinde of life, it is no maruile, sith the common people do neuer iudge aright. The common people doe wonder at the pompe of the Court, and iudge them for the happiest men that deckt with gold and purple, are in greatest fauour with Princes, and Officers, and Councellores to them, little knowing in the meane time what heapes of sorowes lies hid vnder that brave & glittering misery. The common sort preferreth shamefull & beastly delicacie, before honest & vertuous labour, ioying to consume the night in Drunkennes, lechery, and villany, & the day in sleape & apassime, thinking such happy as neither behold the rising and setting of the Sunne. But those that are of sounder iudgement, account the husbandman most happy, if they knew their owne felicitie, to whom the Earth in a sacre quiett maner doth minister a sufficient liuing.

**R I C O.** You haue giuen me satisfaction, good Sir; let me see the

the sight, order, and buildings of your house.

The order  
of building  
of a house  
for the  
Country.

CONO: For my part, I build my house, as they say accor-  
ding to my purse, agreeable to my calling, & to my living. I will  
show you in order how I have cast it, following the advise of Li-  
comachus in Xenophon, whom Cicero doth greatly commend.  
And first, the seat of my house hath moved me to build it after  
this sort. Cato would have a man long in determination to  
build, but to plant and sow out of hand. Our fathers here be-  
fore, observed the same, and seemed to follow the counsell of  
Cato and Columella, with whom agreeth also Plinie, that the  
owner build his house in good order, so as neither the house be too  
great for the land, nor the land too much for the house. And here-  
in it is written, that L. Lucullus, and Qu. Scaxuola, were both to  
blame: for one of them had a greater house then was answerable  
to his living: the other, which was Scaxuola, built a smaller house  
then his living required, where both are impossible to the ma-  
ster: for the great ruinous house, not only is more chargeable in  
building, but also asketh greater cost in the maintaining. Again  
if the house be too little, it will be a destruction & losse of your  
comye and fruit: therefore it is greatly to purpose, in what sort we  
build and ordaine our house. Cato would have the house so seated,  
as the ayre be good about it, and (if it may be) placed at the bot-  
tome of a hill, looking directly South, & in a wholesome corner.  
Varros minde is, to have it placed toward the East, that it may  
have the shadow in Summer, and the Sunne in Winter: with  
whom Columella agreeth, saying, that if ubilitie tene, the seate  
is to be wished in a wholesome place (for Cato, as shall hereaf-  
ter be shewed, would have healthy standing chiefly regarded)  
with a fruitful mould, some part of it champion, some hilly, ly-  
ing East or South, well watered and wooded, and standing  
not farre off from some haven, or navigable river, to the end  
he may carry and transport such things as him liketh. Cornelius  
Tacitus writeth that the Germans were wont to build their  
houses, as the hill, the River, the Wood, or the Lake, would  
best suffer them. And herof sprang at the first so many sur-  
names as are at this day deriued from Mountaines, Rivers,  
Lakes and Woods. Yet others do counsaile, in no case to set  
your

The seat of  
a house,

Your house nere a Marsh, or a great River: for the Fens and Marshes, in the heat of the yere, do send forth pestilent and deadly daunces, and a great number of venomous creatures: which dying, for lacke of their olde moisture, infecteth the ayre, and breedeth sundry and strange diseases. Homer affirmeth very truly, that the ayre which in the morning cometh from the River, is very unholsome and dangerous: and therefore if the house must needs be built nere a River, they would have such haire taken, as the River rather stand on the backside of the house, then before it: and that the front of the house be turned from the hurtfull & unholsome winds, and placed towards the healthiest quarters. Since all waters commonly with dampish vapours in Summer, and stinking colde mists in Winter, except they be well purged with holsome Airs, do infect both man and beast with pestilence: best is it therefore in good & healthy places, to set the house toward the East, or the South, and in suspected aires to place them against the North. From the Sea it is good to be as far as may be, because the winds that blow from the sea, are unholsome, and the space lying betwixt you and it, yields alwayes a loathsome aere. You must beware besides, that you set not your house by any great hie way, least you be molested with passengers, and troubles oftentimes with more guests then you would have.

Neighbour-  
hood.

R. 60. As far as I remember, old fellows did measure the goodness of their dwelling, by the qualities of their neighbours.

C. 60. You say very well: indeed I had almost forgotten it: a froward knave to a mans neighbour, is not one of the least mischiefs, as shall be sayd in the end of this booke. I have knowne sundry good men, desirous of quietnesse: that have forsaken good dwellings, rather then they would abide the injuries and troubles of such companions: wherefore He Godus had some reason in saying:

As great a mischief is a froward knave,

As is the joye neighbour good to have.

But you marvell what I meane by such a long preamble. Surely I am the longer in this matter, because you should understand the reason of bin long of my house. For, whereas there are

(un-

sundry purposes of building; some build for pleasure, some for wantonnesse, and some for necessity, I thought it good to recite the minds of old writers, concerning the building of a house. And when as every one will not suffer such curiosity as they require in placing of a house, some building upon rivers, some without or within walled towns, who cannot shun the neighborhood of the River or the sea; some in lakes, some in woods, and some building upon mountaines, are driven to supply the defect of nature, with Art and industry: I my selfe, sith I can by no meanes avoid the necessity of the river, doe seeke as much as in me lyes, to turne away the discommodities: and because I feele the discommodity of the rising of the floods, I have set my house in this place without the bankes, and mounted it as high as I could: and lest the rage of the water, and force of the peccethould beate it away, I have planted round about it great trees: and that I might shun the damps of the ground, and the blasts of unwholesome winds, I have turned my doores and my windows to the wholesomest quarters.

R I G O. Surely, either you or your ancestors have both commodiously and handsomely placed this house: for the front is double, one part looking towards the East, the other towards the South, and so built with Galleries and Gables, as it both receiveth the Sunne in Winter, and the shadow in Summer: besides, you have a faire Porch as you enter in, that keepeth away the winde and the raine from the doore.

C O N O. All the one side, if you marke it, where the front is, lyeth South, receivng from the first corner, the rising of the Sun in Winter, declining somewhat from the West, whereby it is warme in winter, and not troubled with over great heate in sommer: for this kinde of building hath an equall medly of the winter winds and sommer winds, so that it receiveth the coole winds in Sommer, and is not subject to the bitter blasts in winter.

R I G O. I pray you, proceede to describing of the rest. This base court seemes to be after the Italian fashion, with two gates.

C O N O. This Court I thus devised my selfe. Here was a kinde

kind of Court before, but not so commodious: therefore I made a square wall here with a great gate, for the bringing in of my carriages, and a lesser for people to passe in and out. In the void place here besides the porch I have made a little walke, covered with a Vine, with diuers seats in it for shadow, where I many times walke and talke with such Inters as I have: I have in it a table of stone to sit upon when I am disposed. Over against the gate, as you see at the south side of the Court, there is a Bake-house, and a Coyne-mill, with Quens for bread, and other baked meates, there is also a Brewhouse, with an Dalk for drying of malt to make beere with.

These offices (for feare of fire) you see, are all severed from the house: there is hereinto adjoining a faire Well, which besides the sculce here, doth also serbe my Kitchin, and other houses of office: for within the house, I have neither Well nor fountaine, which is a great discommodity, such as I would give a great deale of money to remedie, both for health and coolenes in Sommer, and for watering my Gardens and Orchards. Water is one of the principallest things to be cared for, as the greatest cause of health both in man and beast: but this want is supplied partly by a good Well without, and partly by Cisternes, receiving the raine water that falls in certaine Conduits and Pipes, which water is most wholesome for the body: and besides the River is not far off.

R I G O. Come on I pray you, let us see this bake-house, I heare that you have a new fashioned Mill, of your owne devise.

C O N O. You shall see it. When as in a great house, there is great need of Coyne milles, and the common Millles being farre off, the way soule, and I at mine owne libertie to grind at home, or where I list, thinking to make a Mill here at home, when neither place nor authoritie will serve mee to build either a water mill, or a wind mill, or a Querne, or a hand mill, doth but a little good: and to build a horse mill were more troublesome. When I saw the wheelles that they use to draw water with, turned with Ases or men, I thought in the like sort the whole of a mill might be turned, and after this sort devised I this organ, which is a couple of Ases, guided by a boy doe easily turne,



turne, and make very fine meale sufficient for mine owne house, and most times for my neighbours, whom I suffer to grinde toll free. But because it is not the speediest way of grinding, I have beside a horse-mill, which if need require, is turned about with a Jade or two.

R I G O. Lo, here is a great lead placed handsomely in a brick furnace in the corner, which I thinke serueth to brew withall.

C O N O. Indeed, to that end it is most occupied, but it serueth other turnes besides.

R I G O. There is a Hopper (me thinketh) over the top of the Daff: where to serueth it?

C O N O. It serueth to convey downe the Salt, after it is watered into the hairecloth, where it is dyed.

R I G O. Wherefore serueth that great Tunne?

C O N O. To water the Barley in, when neede is, other wise it serbeth for a mash vat. Hereby is a bake-house, and a pastrie with two Duens, one serving for household bread, the other for manchet for mine owne table, & for tarts and fine bakemeats. Here are also troughs to keepe meale in, and troughs to lay leaven in, and there is a saice table to mould upon.

R I G O. All is handsome: but what meanes this building about your Court?

C O N O. These buildings severed from the rest, do serue for guest chambers, with a chamber for my hot house: this side you see lieth against the setting of the Sunne in Summer, where the Sunne may lie from none till night.

R I G O. But that little Ile moated about, and severed from the court with a bridge, seemeth to be moze gorgeously and sumptuously built, I take it to bee your owne lodging, where you, your wife, and your seruants, meane to lye safely.

C O N O. It is euen so, and therefore it is built upon a higher ground, both for the better ayre and sayder prospect: beside, my Garden and my Dyche are adioyning to it, which with the sweet smell of the flowers, and the saice beantie of the trees, bringeth both health and pleasure. The windowes, for the most part open all East, and some South, very few West, except from such chambers or galleries Southward, where I dine and sup,  
to



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to receive the sunne in winter abundantly, and in summer very little : the Towler that you see serveth for my Dones house.

R I G O. The great sights of this house must needs fill the Maisters purse, and serve the Kitchin well.

C O N O. Indeed, if as that noble and passing well learned Varro affirmeth, they might be sold, as in some ages they have bene, at eight pound a payre, so that a man might make with such soles, as Columella writeth of, that have given 40. pound for a paire : I graunt I could make a good handsome gain of them, but as they be, they hardly serve mine olone table.

R I G O. What doth not the mad desire of delicacie procure? even in our dayes of late, I have heard, there was threescore Florens given for a payre.

C O N O. I will keepe you no longer here about mine olone lodging, you have seene a great number of better houses, and peradventure had rather overlooke my out-houses.

R I G O. I had so indeed : you have, I see, divided your house into three parts.

C O N O. So I thought it best ; one for my selfe, another for my husbandmen, and the third for graine and fruit.

R I G O. What meaneth this Cell here, so handsomely built at the entrance?

C O N O. This is, sir, my Bailiffes lodging. I lay him by the gate, that he may see who goeth in and out, and what is brought and goeth forth : from thence he may also looke into the Kitchin : and see, & heare what is there done : for beside the meate that is dressed, there are other things done there in the winter mornings. Over my gate I have laid my Steward, from whence he may looke into the Court, and to the gate ; and oversee his neighbour the Bailiffe.

R I G O. Harry sir, here is watch and ward indeede, this I thinke, you learned of Varro, for it is a part of his order.

C O N O. His experience teacheth. Here by is my Rozehouse :

R I G O. Preciull God ! what a sort of toles have you heree

C O N O. Hehodius would have a husband have all his surmises true, and will not have him bozrow in any case.

OF

Of others borrow not, lest they refuse to lend,

So thou shalt want, the time shall passe, and busines neuer end.

Wherefore I haue so furnished my Bailiffe, as he hath of ebery sort two. Marcus Varro diuideth his husbandry necessities into three parts: vowels, where he puts his owne seruants, and such as he hireth; halfe vowels, where his working cattel be: & mutes be these that you see, whereof the smaller sort be these, are, hatchets, and sithes, of all sorts, come sithes, grasse sithes, stubble sithes, handbills, sickles, knives, prasehookes, spades, shouels, wedges, draghookes, great sawes, lesser sawes, hand sawes, timber sawes, pitchforkes, iron hookes, iron forkes, firebills, dung forkes, tongs, sheares, scyars, mattoches, files, cleauers, clasper, lancets, strings, cutting knives, gelding tools, clipping sheares, leabers, presses, rulers, garden rakes, doobles, hammers, chip axes, winches, pulleyes, wheeles, rakes single & double, pokes, becles, collers, bridle, reins, headstalls, halters, traces, cords, hames, Baskets, fannes, Whippes, flayles, strikes, spoakes, Drawing knives, Sacks, Mallets, Betsels, Wedges, Axes, Riplecombs, Heimp betels, Diskaues, Spindles, Wharls, Spinning wheelles of both sorts, Fireshouels, Fire Stones, Credirons Handbarrothes, Dung Carts, Wheelbarrothes, Spawds, Hammers, Ropes, and Line, of all sorts.

The sorts and parts of plowes and Waines, I will shew you when you come into the Count; next the Haybarne: Hog, Heds, Turnes, & Wreels, sawe Waine, Wate, and Water, Pipes, Cornels, and such like, shall likewise be shewed you. When you come to the Brethhouse, & Wineseller: with Colerakes, Sides, Sexcers, Boulding-tubs, Boulders, that you shall see in the Backhouse, and instruments for all other purposes, lay up ebery one in his place, till they be to be occupied: for it is very necessary to haue of ebery sort two, as the number of your seruants and necessity requires, that if one be lost or broken, you be not driven to goe a borrowing, or to leaue your wozks, where by your men shall be idle, while your toles be a seeking: for to consume euery day to get new, is not for a husbands profit. We live in the mean time your seruants loiter, and lose more then the value of their toles.

Now I place first by themselves, such as are most in use, that

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that they may be the reader, & next to them, such as be occupied once a month, as in a year: I give the keeping of the all by tale, to my steward as my daylie, that they may deliver them out as need is, and lay them up againe, and charge them in any case to looke to them every month, that they may mend what is amisse in them.

R 100. Wyer is a jolly fellow, and no goodlier a thing in a man, then to do every thing orderly, and to lay up every thing in such order, as it may readily be found: of which, a singular example doth Iliomachus shew in Xenophon, in his Phœnician hark, wherein a wonder it is to see what a deale of stuffe hee had bestowed in so small a vessell: he carries with him all the furniture that a man should need, and every thing in such order placed, as they were at hand when need was, without any trouble.

CONO. I my selfe have an inventoy of all my husbandry implements, and so hath my Wally and his wife: my steward hath the key of the storehouse, and delivers out and receiveth as I told you, what every man needs: for I willingly neither borrow nor lend: I have a neighbor as thine of whom sometime I borrow, and lend againe: but except them, to none, as Cato teacheth me.

R 100. The same Cato also, as I remember, teacheth to know a mans husbandry by his toles, & therefore by your great number of toles, a man may guess you have a great deale of occupying.

CONO. The double number of them makes the master the greater: otherwise if there were but to serve the turne, they would not seeme so many.

R 100. I pray you goe forward with your description.

CONO. You see a boyd come before the Witchin, which is an entrie both to the Witchin, to the folkes chamber, and to the Ore-houses, so that if any misfortune happen to the cattell in the night, my men may speedily helpe them.

R 100. The Witchin is very well handled, in that you have so well purgated the coiffe. The Kirchin

CONO. It is because I have a great number of servants, which for lacke of other room, do vint and sup here & there, the purgating of smoking, is a good safetie against fire. Yet in England (especially amongst their most ancient buildings) and

in other neighbour countries that I have sene, they build their Kitchins with double rowes; one opened and parted square from another, or else round and open in the manner of a loober; and surely it is excellent both for the absorbing of smoake and the sweete keeping of the Kitching, as also for preserving all neighbouring comes from many annoyances both of smoake and smells which ascend or rise from the Kaindges, of which Kaindges you cannot with conveniency have lesse then two in a Kitchin, besides a convenient boiling place, and these rowes must be pargetted as well as the flat ones, the wall being whitened, it will save the expence of many Candelles.

RIGG. Here is a good handsome rowe by the chimney, well stozed with red Herring, Bacon, Partimas Beefe, Meats fonges and hogges chacks; there is also a handsome sincke by the Kitchin.

Larder.

CONO. This lettised wall that you see, is openeth to my Bay-likes chamber, so that he may see what is done in the Kitchin, and about the house. Hereunto is also toynd my Larder, a vault with three comes, one serving for Butter and Spilke, the other for Beere and Wine, the third to keepe Flesh in of all kinds, powdered and trypoudered, and fowles of all sorts, with convenient hooks and Tentons to hange them up from trouble. Here have I no windowes to the South, nor to the West, but all to the North, and to the East, because these quarters are least subiect to corruption, and will longest preserve any thing. Above in the loft yonder, do I lay my coze, upon a faire floze of Stone or plaster of Paris; for they are the safest from breeding of vermines or causing of corruption; the board floze is tollerable for necessity sake, but the floze of earth is utterly unwholsome; and this I have closely fenced and sealed againe with Spile, recirring the light by Lattisse windowes from the North, serving for my fruit; so that quarter is cold, and not moist, whereby it preserves best, for that quarter is cold, and not moist, whereby it preserves best, both Wheat, Corne, and Fruit. Now if you will go through this doze, you may behold the back side of my house: lo here a faire thessing floze, strongly boarded with the oaken plank, so closely ioined together that not a grain can be lost in any chink, or crevise. And hereupon my coze is sundry times threshed, fanned, and winnowed, and many other things done, chieflie in the winter

Corneloft.

Appleloft.

winter-maynings. though I have beside a thessing place in  
 my barne. On each side are lodgings for my servants, and  
 other rooms and lotts for straw and fodder for my Cattell :  
 and these by the stables, are also servants lodgings on every  
 side, and my Wains chamber nere the kitchen, and the wa-  
 shing house. You see this forehall closed round about, to the end  
 that the cattell, when they be watered and put forth, while their  
 house is made cleane, may be in safety. And here I keepe also  
 Geese, Duckes, Peacocks, Turkecocks, and other poultry.  
 It is as you see, is enclosed with stables, barnes, and other hou-  
 ses, that nothing can get out. Varro will in any case have two  
 Courts, an inner court with a little pond in it of standing wa-  
 ter, or running water, in manner of a fishpond, and there he  
 would have Horse & Oxen, comming from the field, or stable, to  
 be watered and washed, & to serve likewise for Sheepe, Swine, &  
 Geese. In the viter Court would hee have a lake to cast in  
 topoles, staves, and peeces of timber, for instruments of husband-  
 ry, that they might there be seasoned. This Court he would  
 have often strewed with straw, and chaffe, that being trampled  
 with cattell, it may serve to lay upon the ground. You see in this  
 court a double dunghill, one of them newly throwne out of the  
 stables, an other old, and serving for the field : for new dung is  
 nothing so good as the old, for manuring of the ground.

RIGO. What meanes these twigges, bowes, and straws,  
 cast upon the dung ?

CONO. This preserves the dung, that the sunne that the  
 ground requires, be not sucked out of the sunne : and hither also  
 runs the water from the Laundry to moist it the better. Varro  
 would have here also a lodging for servants: But least we carry  
 too low among the dunghills, let us goe see the other buildings  
 about the Court. These great rooms that you see, be Barnes to  
 lay Cozne in : in some places they be houses, in others againe, Barnes  
 Stacks, set upon props, which they call motes : but the houses  
 are a great deale better. Next to the Barnes, are the stables,  
 standing arow round about the court. And because Virgil would  
 have the stable stand toward the South, and Vitruvius, nere the  
 fire, I have followed their order in building my stables. And I.  
 have I set here my stable for my cart-horse. I have another stable Stables

where my stone lodgings, for my horses of service, and hacknries.

R 100. That cometh to be very handsomely built.

The modell  
of a perfect  
Stable,

CONO. Des questionlesse, for I doe not thinke a man can be too curious in this office, so long as he holds himselfe within the rule of moderation and wholesomenesse; the walls of the stable are strong and warme, the windowes of competent spaciousnesse to giue sufficient light, and with close shuts on the inside to darken at pleasure; they are lettised not glassed, for glasse is too hot in the winter, and doth sticke in the summer; in Italy I haue seene the windowes made of strong linnen cloth, supposing the glasse to hold out too much aire, and the lattise to let too much in; and the cloth by reason of its opennesse when it is stretched, to be the most indifferent defender: But so long as the shuts are made close, yare and diligently obserued, this opinion is but curious.

The racke is made straight and vpight, with square stauces and a strong head; from the bottome of the racke to the mawger there goeth a fallet wall of boards a pretty distance from the first wall, so that all manner of hayseeds, dust, and other filth whathsoeuer, falleth to the ground betwene the walls, and neuer annoyeth either the horse, the mawger, nor any perspicuous place in the stable.

The mawger is made of a competent height, rather high than low, with strong posts, round head-træ, and cleare wrought oaken boards, toynd together so close to the former wall of boards, that it will carry water, and vnder it a conuenient holotomnesse to hold the litter.

The plaunchers are of strong well seasoned oaken planks, and laid rather absolutely in a true leuell line, than any way apparantly rising vp to the top; so; though it be the general custom, yet it is to the horse that standeth on the, both dangerous and vneasie: yet if there be an vnapparent and hidden descent to the graptæ, it is not amisse, the planks doe not lie so close but that the wyne may passe betwixt them: and so; the safer keeping of the timber, and better conueiance of the filth, there is a vault or trench of wyche which runnes all along vnder the plaunchers. In Italy, they use to plaunch their stables with hard boards and timoth, few pauing stone, and it is long lasting, but

but both too cold and too slippery, and dangerous upon any sudden motion, lying downe, or rising. The Crampetree is of strong squared oaken quarters, and the ground behind it paved and raised to an even leuell with the planchers, so that when at any time the horse shall goe backward, yet he may stand on a iust leuell, and not stand higher before than behind, which is the onely the first breeder of diseases in an horses hinderparts.

The rest of the ornaments of the Stable are suitable to these purposes; for the Stalles are large so as an horse may turne in them, the partitions strong and smooth; the pillars strong and round, adorned with rings, hooks, and other practicable things to carrie necessaries; seates to sit on, byndges for provender of all kinds, a faire Cofferne for water, and a strong chaine to crosse the stable door for better fastie.

The next are houses for my sheepe, and next them for kine, calves, and heifers. There is a hogstie with two rooms, one for my farrowing sowes, the other for hogs, & boares. There is also a third stie, not farre from the washhouse for the salting of my hogges: every kinde hath their keepers lying neere them, that they may be at hand what soeuer chancessh. Last of all, there stands my Haybarn, which hath in the upper roomes my hay, & beneath, waines, carts, vannes, waggons, coaches, harrows, sleds, plowes, roulders, wheelers, naues, poles, rakes, plow beams, heads, sheathes, Reibourds, hales, plowset rests, spindles, and such like, which are there safe from wet, and from pilferers. And all these I leave to the trust and care of my Bailiffe, who is a skilfull honest man: for as Xenophon saith, the choise of a Bayliffe and a Whelitian ought to be one: you must chuse such a one, as being an expert husbandman, may well be able to take the charge, and not to be ignorant of those things himselfe, that he commands others to doe, for nothing is well taught or learned, without example: for as Cato saith of a husband of the old stampe, it goeth ill with that matter whom the Bayliffe must teach. As Ilicomachus being demanded of Socrates, whether hee would buy a Bayliffe, as he would hire a smith, or rather teach him himselfe at home: he answered, he would have him of his owne teaching: And surely, I thinke hee shall neuer have a

The choise of Bailiffe of husbandry.



What  
things  
ought to  
be in a  
Bailiffe of  
husbandry

good Bailiffe, that is not able himselfe to iudge skilfully of him: nor let him euer thinke to haue his worke well done, that knoweth not how, nor which way things ought to be done, but must be faine to learne of his man: for there is none can iudge of a worke, but a workman. Therefore in the choise of a Bailiffe, I would haue foure things chiefly considered: that he be loving, diligent, meet to rule, and trusty, and if you will adde a fift I am well contented, that is, that he be not giuen to drunkennesse: for a drunken man loseth with his memory, the regard of his dutie. I doe not enquire whether he haue bene brought up civilly or vncivilly, but I would haue him a hard fellow, brought vp from his childehood to labour, and one that were thoroughly well skilled, of a meane age, that he be not unwilling to worke for youth, nor vnable to trauaile for age. I would haue him haue some skill in carpentry, that if there happen to be any thing broken about his Stables, his Carts, or any other instruments, he might speedily mend them, and that he could mend walls and hedges. I would haue him also not vnskillfull in the diseases of Cattell: such a one as hath bene brought vp with skillfull husbandes, will proue meetest to haue charge. For there be a great number, that though they be skillfull enough in their profession, yet haue they not gouernment in them: but either vsing too much sharpnesse, or too much gentlenesse towards such as be vnder them, doe hinder the profit of their master: and therefore I would haue a Bailiffe well tried before he be taken: neither is it onely to be sought, whether he be skillfull in this craft, but whether he be trustie and loving to his master, without which he is not worth a rush, though his skill be neuer so great. And chiefly he must be skillfull in this, to know what worke is meetest for every man: for some workes require strength more than skill, and others, otherwise. And therefore in appointing of these, he ought to haue great iudgement and good discretion, which he cannot haue, except he haue good skill. Therefore a Bailiffe is as well to be taught, as a Smith, or a Carpenter, and the knowledge of husbandry is greater and of more difficultie: wherefore I maruaile, that in this so necessary an occupation, there are found so few Masters and Apprentices.



RICO. Of whom would you have your Bailiffe to be taught?

CONO. Your question is good, I will shew you, though very few haue taught what belongeth to a husband in all things, neither shall you finde many skilfull in every poynt. Therefore he that shall be a Bailiffe, must be taught by degrees, he must first begin when he is a child, with keeping of Sheepe or Swine, and when he is older, with doves of Cattell, and keeping of Horses: he must learne next to digge, to thresh, to set, to sewe, to hedge, to build, to mend such things as are broken, to play the butcher, to give drinckes and medicines to sicke Cattell, and such other like things. And thus must he proceede from one to another.

RICO. You shew mee wonderfull Philosophie.

CONO. As I said at the first, his best age is betwixt thirty and threescore: for the flames of lusty youth beginning to abate, he will not be so hot in his wooing: for whiles he followes that game, he will have no minde but of his minion, neither shall any reward be so welcome unto him, as the fruit of his fancie, nor any grieve so great to him, as the failing of his desire. If he once passe threescore, he waxeth slothfull and unable to labour: for I had rather have the worke of a painefull and diligent Bailiffe, then the service of a great number of slothfull lubbers: as he that had rather have a Lion captaine over Harts, then a Hart captaine over Lions. This must chiefly be looked unto (since early going to worke is a great matter) that the Bailiffe be a good riser, and that, supplying his Masters place, he may be first up in the morning, and the last that goeth to bed, and that he see the doores fast locked, and every man in bed, that the cattell have meat enough, and be well litted, that he set forthward, according to the time of the yere, such as do loyter in their labour, that he himselfe go lustily before, that he suffer no man, after it is day, to lag behind, but that they follow the Bailiffe lustily with a courage, as if he were their captaine in a skirmish: and that he use sundry deuises to cheere them up in their laboz, sometime to helpe him that fainteth, to take his toole out of his hand, & labour lustily before him. And as a ravenous full shepheard, early carrying out his Sheepe, & bringing them home late, looeth that he leave none of his flocke behind, so likewise ought a good Bailiffe to carry out his men, & to have

god regard other them. If any of them be hurt or sicke, let him looke to the nursing of them, and if they be very sick, to carry them to the sicke folkes lodging, & to see that they be well ordered: and to that use haue I built yonder house that you see remo-ved from the other buildings, that the sicke may be had thither & looked into, specially if their diseases be contagious, least other should be infected. It is the Bailiffs duty to haue such regard of the health of his seruants, that their sickness may be prevented by good medicines & good looking to: as to see that their meat and drinke be wholesome & good, and giuen in due season: beside, that the Bayliffe eate his meat with them, and not by himselfe, whereby it shall be the better ordered. And because Physicians are not alwayes at hand in the country, it behoorth to use such remedies, as experience hath taught, & such as haue holpen others of like diseases. Those that labour in the Sunne (because the Sunne hurteth the body & weines) their diet must be the thinner, that they make not too great meales, but eate litle & often: this order keepeth them in health, & helpeth digestion. Some do use to giue Worme wood, Wine, or pottage made of Worme wood, It is very necessary for them sometimes to recreate themselves, so that in the meane while they giue not themselves to naughtiness. There must be heed taken, that they drinke not when they be hot, nor lye upon the cold ground: if their water be not good, it must be well purified. It is very good also to let them drinke barley water. We must remember that seruants be men: besides, such good looking to, will buye a greater good will & duty, and lightly they will serue the faithfuller and better when they haue their health, which haue had good cherishing in their sickness: and besides (which is not well obserued in greater gouernors) the Bailiffe must beware that he deale not too cruelly, nor too gently with them, that he alwayes make much of those that be diligent & painefull, that he be not too halfe with the worse for, that they may rather reuerence him for his severity, then hate him for his cruelty, which he shall easily bring to passe, if he rather beware that they offend not, then after their offence, too late, punish them: For there is none so good a handle for an evil disposed person, as to let him alwayes be occupied so that Caloc saying herein is most true, that men in doing nothing,

leaving

learne to doe euill. Let them haue their allowance, and their  
 meat in due season, let them alwayes sate together in one place,  
 and the Bailiffe with them, that he may be an example to them  
 of all christines. If he finde any of them to haue laboured paine-  
 fully and truly, let him giue them a good countenance, and en-  
 courage them with rewards, to make them the willinger to do  
 their duty: beside, let him looke that they be rather well clo-  
 thed, than curiously apparelled, that their garments may keepe  
 them from the colde and the raine: let their wages be well paid  
 them, that the want thereof be no excuse for them to loyter in  
 their labour. And as meat and apparell is necessary for them, so  
 likewise is correction. For the wise man saith, giue a Foole the  
 whip, an Ass the snaffle, and a Foole the rod. And againe, he  
 that deales too gently with his seruants, shall make them in  
 the end stubborne and froward. Aboue all things let him see that  
 they feare God, let him in no wise suffer them to sweare, or to  
 blasphemie, nor to use filthy or vngodly speech: but let him pro-  
 uide that they be instructed in the Catechisme, that they vse  
 prayer, that they goe to Sermons upon the holy daies, and re-  
 ceive the Sacraments at times appointed, that they be not hun-  
 ders of Alehouses or euill company. For, as the Poet sayth,  
 it is lawfull to be well occupied, euen on the festiual daies.  
 When they haue serued God, and dined, let them walke a-  
 broad in the ground, let them looke there be no Cattell in the  
 Co.ne, and stop such gaps as they finde open, and looke that  
 their Cattell be in safety abroad. To be short, the Bailiffe  
 must in all these matters be, as it were a Bishop, or a Pastor  
 of the woorkes, so shall every man the better doe the woorkes that  
 belongeth vnto him. The Bailiffe must neuer be from their  
 hailes, least in his absence they fall to loytering, neither must  
 hee suffer them at any time to be idle: hee himselfe must not be  
 giuen to drinkeing or gaming, nor to hunting or fishing, except  
 for his masters profit: let him very seldeime entertaine any  
 guests, except they be of his masters retinue: let him not be-  
 stow his masters money about his owne merchandize, for such  
 kinde of bargaining makes him the flacker in his duty, and ma-  
 keth his accounts seldeime fall out iust. Aboue all things this  
 is to be wished in the Bailiffe, that he doe not thinke himselfe  
 wiser

The Bailiffe  
wife,

wisser then his master, or suppose himselfe to haue more skill then he hath, & that hee alwaies seeke to learne such things as he is ignorant of. For as it is very profitable to do any thing skillfully, so is it more hurtful to do it untowardly. Columella had rather haue a Bailiffe that could neither read nor write, so that his memory be good: for such a Bailiffe (saith he) will oftner bring his Maister mony, then a booke: because (not able to write) he cannot so easily frame a false account. The Bailiffes wife must alwaies be with him, that she may keep him from running at rovers, & may helpe him in his labours: her age must be such also, as we required in the Bailiffe before; she must be painfull, healthy, careful, & honest. She must not be too ill fauoured, lest she be loathsome unto him, nor too beautifull, lest hee doat too much upon her, & keepe home when he should be abroad. Shee must in the meane time looke to the Kitchin, & to other works at home, gouerne the Maides, & keep them at their worke, looke to their necessaries, and giue them their allowance.

R I C O. You seeme to me here, to make the Bailiffe a Maister, and the Maister a Bailiffe.

C O N O. This age of ours, quite corrupted with delicacy and daintines, little regardeth the honest and profitable orders of our forefathers: for in those daies the Maisters themselves plaid the husbands, and thought it not to go well with that Maister that must be taught by his Bailiffe, as Cato witnesseth, and Varro also complaineth, that the husbands in his daies had forsaken the plow & the sith, & gotten themselves within the wals, & spent their time rather in maigames & midsummer sights, then with tilling the ground, or planting of vines. Therefore Cato & the old writers, do attribute many things to the Maister, that we assigne to the Bailiffe. And I, though I seeme to put the charge of the household in the hands of my Bailiffe, yet will I my selfe be ouerser, and haue every thing done as I appoint, entreating gently (as I taught the Bailiffe afore) both the Bailiffe & my labourers, regarding more their labour then my gaines. Here you see the reason for my husbandmen, severed from mine own house, but yet so, as I may easily see what they do. Here I and my wife, with our household seruants lie. If it please you, I will carry you abroad and shew you my ground. You must not looke to see the great

countrie

countreies of Metellus, or Lucullus, but the possessions of apocryphal country man, that contented with his state would be as he is, & would not change liues with the Emperour.

R I G O. I pray you let me heare your opinion of the field & the tillure thereof: for I see you are a perfect husband, and nothing vnskillfull. I have a great desire to heare some rules, and such as serue our future best.

Of the tilling and husbanding of the ground.

C O N O. If it be a shame to an apprentice at the Law, and a pleader of causes, to be ignorant of the law wherein he dealeth; a greatest shame is it for a professor of husbandry, to be vnskillfull in the ground whereon his whole trade lyeth. Now is he able to iudge bryghtly in husbandry, that knowes not which way to till his land. The professors of all other arts, do commonly keepe to themselves, such things as be the chiefe mysteries of their knowledge. Contrariwise, the husbandman reioyceth to haue euery body made pryncing to his skill, and being demaunded in what sort he doth this and that, he gladly declareth his whole dealing in every point: such good natured men doth this knowledge make. I haue ordered my ground here, according to the diligence of the old Fathers, rather then for the wantonnes of these times. Therefore I will first shew you their opinions, and afterwards mine owne fancie. First, Cato appointed nine degrees of the land in Italy. The first, the Vineyard, that yieldeth much and good wine: the next, the well watered Garden: the third, the Willow Grove: the fourth, the Olive trees: the fifth, for Beddow: the sixth, Coene ground: the seauenth, for Cople ground: the eight, for Timber trees: the last for Pasture. But these degrees, as Varro sayth, are not generally allowed of, neither haue we the vse of them all in these countreies: but make most account of such land, as serueth for Garden or Orchard ground, Coene, or Fishponds. Of Coene ground I will first entreate, and afterwards of Pasture, Beddow, Willow land, and Willow Groves.

The good nature of the husbandman.

The degrees and sorts of ground.

R I G O. I pray you then take the paines to shew the nature of it, and which way the best ground may be knowen.

Of Coene ground.

C O N O. Cato counteth that the best ground, that lieth at the foot of a mountaine, being leuell and lying toward the Sunne, as the whole countreie of Italie lieth. In cold and northerly countreies,

countreies, it is good to haue the land lying East and South, least these two quarters, being hard off by any hill, the land be frozen with colde: but in hot countreies it is better to haue the ground lye North, both for pleasure and health.

R I G O. They say it is needfull to know the conditions of every ground.

How to  
know  
the good  
nesse of the  
ground.

C O N O. It is so, and sooner shall you do it, than the conditions of a man: so being well skilled, it will not deceive you, but deale iustly with you. To know the nature of every ground, Iacomacius in Xenophon, both wilt you to marke well the plants, and the yeld of the Countrey, except you will loose your labour, or fight with God. VARIO counsels you to looke whether there be in the land either Stone, Marble, Sand, Gravel, Kaddell, Chalk, Clay, Pebble, or Carbuncle, that is, ground over-heated and parched with the sunne, which wil burne the rootes of what, sooner commeth in it. Also if it be wet or weeping ground, or subjected unto other inconueniences, & such ground also, according to the nature of the soile, is good or euill. In some Countreies stony ground is altogether barren, specially for Come and Fruit: In other places againe, they vse stones in the manuring and bettering of their land, as in certaine places of Arden is to be seene. And also in sundry parts of England as in some parts of Hertfordshire, Bedfordshire, and many others, where the stones are so innumerable that they cover the ground and the mould is not to be seene; yet their groweth by industrie as good and as strong wheate as in any other part, and no other reason to be giued, but the benefit of the stones which are to the ground as good as a measure, for it is to be vnderstood, that these stony earthen haue in them a naturall Barrennesse and Lightnesse, so that where the stones are removed, there every shadow of rayne washeth away the mould from the root and leaueth it to the violence both of the Sunne, the frost, the winter and Tempest, whereas the stones couering the grayne keepes it warme and defendes it from all these iniuries: and herein you are to obserue that these stones are but small and of no great paye or wayght, but so as the grayne when it sprouteth can beare them up by reason of their lightnesse & want of sufficient mould to bend them. Theophrastus writeth, that the Corinthians did cast away all the stones out

out of the fields at Saragosa, and there by made the ground the  
woyle, when, the stones being away, and the country hot, there  
was no succour left to defend the ground from the extreme heat  
of the sunne. In other places in stonie and hilly ground, they do  
prosper well. In like sort also, in all Countries we must regard  
the layre of the Countrie, and the nature of the seed that we sow;  
so: Gravel in some places, is cast upon the ground in stead of  
dung, & some things prosper best in gravelly grounds. In Barba-  
ry (as Columella doth witnessse) the very rotten sands exceed any  
other ground in fruitfulnessse. It is also something to the purpose  
whether the gravel be white, red, or yellow: besides, some grounds  
doth deceive both with colour and quality. In some Countreies  
the black mould is only esteemed: in others, the fat red mould is  
thought best. In England, the chalky ground beareth good coine,  
and pastures very well. In some places the thicke and the clam-  
my ground is most fruitfull. In all these it is to be learned, what  
is best for the hilly ground, what for the valley, what for the tilled  
what for the lay ground, what the moist sedge ground requires;  
and what the dry and barren. Also in planting, what ground is  
best for vines, what for other trees, what delights in dry ground,  
what in moist ground. Virgil commendeth a marllois ground that  
is fat, and will scarce be defoliated, for such ground is filled with  
smallest charge and labour: the next, that which is fat & stiffe,  
which greatly recompenseth the husbandman his trouble and  
charges: the worst is, that which is dry, leane, and stiffe: for  
both it is tilled with great labour: and beside neither answereth  
in his crop the husbandmans trouble, neither serveth it for good  
meadow or pasture any time after, and therefore such ground is  
not to be meddled withall. Also, the goodness of the ground is  
easily perceived by perfect tokens: for a clod sprinkled with a  
litle water, if in knocking with the hand it be clammy, and cle-  
aving, & sticketh to the fingers like pitch, when it is handled, as  
the poet sayth, and breaketh not in falling to the ground; as al-  
so if you dry it either in the sunne or against the fire, if after it  
is dried it willingly falleth to dust: this sheweth a naturall fat-  
ness and richness to be in it: best den, how many into the mould  
that is good for Corno; if it beare Bulrushes, Whistles, Whe-  
ate-leaved grasse, Darnel, Broomes, Blackethorne, and such  
like,

Signes of  
the goodness  
of the  
ground.





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like, as never grow but in good ground: as on the other side, lothsome and ill savoured weeds, declare a leane and a bitter ground: ferne, and withered plants, a cold ground sad and heavy coloured, a moist and a wet ground: a raddel & a stony ground, is discerned by the eye. Also it is most probable that all Clays whatsoever either simple or compounded which are laden with Grasse, Worme, Whynnes, Ling, Heath or their like, and all manner of Herbs simple or compounded which naturally bring forth Mossy Grasse, ferne, Heath, Twitch, moilde Wyer, or any Harsh and stinking grasse, that these are most barren. A stiff and a tough clay, by the labour and toile of the Wren. A good token is it also of good ground, where the Crows and Pies follow in great number the Plow, scraping in the steps of the Plowman. The goodnes is likewise known, if at the Sun setting, after a Mainebow, and in a shewe of raine, following a great drought, it yieldeth a pleasant savour: also in taste it will appeare: if tasting a clod that hath ben watered in an earthen vessel, you finde it sweet, it is a signe of rich ground, if bitter, a great token of barren ground, if it be saltish, it is to be spurned, and not to be used upon the droughthill. You must remember also, that ground will sometimes change, and of fruitfull become barren, which hath bene sene, as Plinie reporteth, in the old time in Thessalie, and in our time, in stony places of our Countrey. Beside, one kind of ground, though it be neuer so fertill, will not beare all things, as the Poet wisely noteth, Ne serues one ground for every crop. Moreover, the disposition of the Heuens is a great matter, all Countreies haue not the weather and ayre alike: wherefore it is the part of a good husband to know the nature & propertie of his ground, and to make the disposition of it so: every part of the peere: he must also consider what crop is best so: every layer. Some ground serueth so: Corno. some so: Vines, some so: Olives, some so: Medow, some so: Pasture, neither may all things well be sown in rich ground, no: nothing in barren ground. Such things as need not much moisture, are best sown in light ground, as the great Caluer, Sperie, Chick, and the other pulses that are pulled and not cut. Those that require more sustenance, are sown in richer ground, as Pot-herbs, Wheat, Rye,

Barly,

Ground  
will  
change.

The dispo-  
sition of  
the heauen:  
to be obser-  
ued.



## of Earable-ground and Tillage.

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Barly, Linseed, &c. Some of them do good to the ground the yere following, as Lupines, that are used to be sown for the bettering of the ground. There is difference also to be put betwixt fruits for pleasure, & such as be for profit as fruit trees & flowers, and such things as yield both pleasure and sustenance, & are also profitable to the ground. You must choose for Willows, Ashes, and Alders, a wet and a marish ground, & contrary where you will have Cozne & Pulse, that delights in drye ground: Superage and such like, must be sown in shadowy places, and other ground for Duckets, Timber, Past, and fowell: yea, such ground as is very gravelly and barren, hath his use, where you may plant Birch, and such like, and watry grounds where you may set Alders, Bowne, and Fulkushes.

R I G O. Surely the temperature of the ayre, doth much in the fruitfulness of the ground, for I have oftentimes marked, that one kind of ground is more fruitfull in one Countrey then in another.

C O N O. In Venefri, the gravell ground beares Olives best, where as about Granado, they requite the richest ground that may be. When in other places the Vine doth not prosper very well in stony grounds, about the Rhine the very ragged rocks do yield as fruitfull Vines as may be seen. Plinie doth witness, that in some places the Vines do grow even in the fennes and marshes, such a secret force is there in nature. About Chalcia, an Island about the Rhodes, it is said there is a piece of ground so fruitfull, that they mow their barley being sowed in his season, & their Crop, sow it again, and gather it with their other graine. The Albanoises receive the fruit of their land *ἀναγὰς ἀπὸ ἀνὰ* untill and unsown, and being once sown, it yieldeth his crop three yeres together. Homer calleth Phrigia *φρυγία* and Argos *ἀργεῖα*. Hedorotus writeth, that Babilon is so fruitfull, as the ground yieldeth increase two hundred and three hundred fold. Plinie affirmeth, the increase in his time to be fifty & to good husband an hundred fold. About Monte Gibello, it is reported by credible persons, to be an hundred fold. Italy is so fruitfull, that Varro calleth it the garden of the world, because it is so fertile & well planted in every place. Campania, being full of cozne: Apulia, plenteous with wine: & Venefri, abounding with Oyle.

Italy, the  
garden of  
the world.

R I G O.

The fruit-  
fulness of  
Germany.

R I G O. I have heard say, that Germany & France have not bene in times past very fertill, & that they have bene altogether without fruites, and now we see no country more fruitfull, that yieldeth greater abundance of all things. Whence can you finde better wines, then about Banaer and the Rhine? I speake not of their great store of graine, wines of gold, silver, iron, and lead. In the country of Thuring in Germany, it is said, that after wheat once sowed, the ground will yield this of it selfe two yeeres together.

C O N O. Yes, and in our Countie here, we have ground that will beare wheat every yeere. Rape seed being once sowed with us, both oftentimes yield his Crop two yeeres together, without sowing or labouring.

The fruits  
fulness of  
Barbary.

R I G O. Under the Northern Pole, it is reported, the ground is so fertill, as they sow in the Spring, & reape at Acone. In Barbary, where the ground is low, they plant under the Date tree the Olive, under the Olive the Figge tree, under the Figge the Pomegranate, under it the Vine, under the Vine they sow wheat, and under wheat Wasse, all prospering one under the others shadow, and yielding their fruit the same yeare.

C O N O. That made me to say, that the ground followeth the disposition of the heavens.

R I G O. But sith in all places the ground is not of like goodness, what if we chance upon a leane and a barren ground, as heathy, bushy, and gravelly ground: may these be made fruitfull, and amended by Art?

C O N O. Verily well; there is no country that the most gracious Lord hath left without sufficient yield, if labour and travail be not refused.

R I G O. What skill I would gladly under stand.

Of dung-  
ing of  
ground.

C O N O. It is brought to passe divers wayes, as by plowing, hacheing, harroweing, clodding, burning of Warts, watering, stanning, marling, sandeing, lymeing, manuring and watering, principally by dunging and diligent labour; and to this end serve those heapes of dung that I lately shewed you.

The sorts  
of dung.

R I G O. I pray you let me know what dung hath most enrich the ground.

C O N O. Varro and Columella his follower, appoint these sorts  
of

# of Eararble-ground and Tillage.

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of doungs: the first of Poultry, the next of Hen, the third of Cat-  
tell. Of the first sort the best is that which is had out of Pene-  
houses, the next is of Pullins, and all other fowls, except Geese  
and Duckes, which is hurtfull. The people in the old age had  
such store of Poultry and Fowle, as the doung of them sufficed  
for the manuring of their ground. The next to this, is mans or-  
dure, if it be mixed with other rubbish of the house; for of it selfe  
it is too hot, and burnes the ground. Mans urine, being sixe <sup>or</sup> <sup>seven</sup>  
moneths kept, and po tured upon the rootes of Apple trees and  
Vines, bringeth great fruitfullnesse to the tree, and giveth a  
pleasant taste to the fruit. In the third place is the doung of  
Cattell, whereof the best is the doung of Ases, because this  
beast doth chaw with most leisure, whereby his meat being  
well digested, is made the profitabler doung. Next to this, is the  
doung of Sheepe, next of Goates, then of Oxen, and Horses: the  
worst of all of Swine, very hurtfull to Corno, but used in some  
places for Gardens, for lacke of other doung, but is a great  
breeder of noysome weeds: yet Plinie seemeth to allow it as the  
filth of a filthie creature. The doung of Horses likewise, where  
the Horses are fed with Barley, doth breed great store of weeds.  
The Lupine, before he beare his eoe, is most commended, be-  
ing turned up with the Plow or Pattocke, and layd in bundels  
about the rootes of trees or Vines. Where they have no store of  
Cattell, they use to mend their ground with straw and Feine,  
and with the Ralhes of Lupines, and the branches layd together:  
in some Ditch: hereunto you may cast Ashes, the filth of fennes  
and pyries, and straw, with dust and other things raked together  
but in the midd, you must lay some sound matter against the  
breeding of Adders and Snakes: also Hemlockes, Wallwort,  
and the weeds, growing about willow Trees and Feine, with  
other such rotten weeds, you may gather and lay under your  
Sheepe: They that dwell in Chabellie and Heathy grounds, doe  
take the Turves of the Earth and the Heath, and laying them  
in heapes powdered with a little doung, suffer them to lie and rot,  
and after lay it upon barren ground, but specially where they  
keepe great store of Sheepe, they cast into their folds such  
Turves pared from the ground. Columella counts them but evil  
husbands, that have of every one of the lesser kinde of Cattell,

Old dung  
best for  
Corne,  
and new  
dung for  
Meadow.

The ob-  
serving of  
the Winde  
and the  
Moone, in  
mending  
of the  
ground.

Wet dung  
hurts the  
field.

lesse then a Cartload of dung in 300. dayes, and each of the greater for ten load, beside the filth and durt of the yard. This is also to be noted, that the dung that hath lien a yere, is best for Corne, so; it both is of sufficient strength, and beareth lesse weeds; but upon Heddw and Pastures, you must lay the new, because it brings most grasse, & this must be done in February, the Moon encreasing, for this is the best time to cause increase of grasse. In the manuring of your ground, looke that you lay most dung upon the top of the Hill, for the raine will beare it to the lower parts fast enough. See that mindes to have his ground beare Corne, if hee meane to sowe in the end of Summer, must turne in his dung in September: if in the Spring, he may lay it on at any time all the winter. What time soever it be done, you must looke that the winde be Westerly, and the moone in the wayne. This obseruation helpeth greatly to the bettering of the ground. Besides, you must not forget to let the dung be drye before it bee layd upon the ground. For though Columella do bid the contrary, our owne experience will us not to follow him: for dung while it is moist, doth more harme to the ground then good, as daily experience teacheth. Now as your land will ware colde, if it be not dinged, so will it be dried or burnt, if it be manured yearly, or too much. The watry ground requirerh more stoe of dung, dry ground the lesse.

But besides all these manurings, there is another not inferior, but surpassing any formerly spoken of, especially upon extreme barren sands, and cold clays, and that is Lime, a thing of that warmth and comfort, and so well seasoning and giuing saltnesse to the fresh earth, that it is accounted amongst husbandmen the mother of all fruitfulnessse. As lime, so old woollen ragges of all kinds chopt small with an hatchet, and th:okne on the land is an excellent manure: so is also the shavings of horne, and the howes of all sorts of Cattell whatsoener, being likewise hewed and cut into many paces; and lastly, Venemweede of the Sea which groweth at the bottome of the Rocks, whereon the sledge of the Sea beateth, the vertue thereof is wonderfull vpon barren grounds.

R I GO. I remember, I haue yet this same Earth taken out of the fields nere adioyning, and layd upon the land, I therefore guesse

guesses the earth may be mended with earth.

CONO. The Germans, besides sundry other sorts of enriching of their grounds, doe instead of doung, cast upon it a kind of pitch and fatnesse of the earth: (Plinie counts it to be first devised in England and France) called Marge, as it were the fat of the earth: but I rather thinke it to be the invention of the Germanes, with whom yet both the name and the use is retain-  
 ed: it is gotten in the deepe pits, but not alike in all soyles. That part of France that lies upon the Rhase, doth shew a sandy kind of Marble differing from the fat Marble of Germanie, but of the same quality: which, caried upon the Sea in vessels, is solde as a great merchandize. In some places the scowling of Ponds and Ditches, is used, to the great enriching of the ground, in the mountaine and barren grounds. In some Countries they make their land very fruitfull with laying on of Chalke, as Plinie testifieth of the Burgundians, and the Gascoynes, and in Germanie in our dayes, this manner of mending of ground is common. But long use of it, in the end brings the ground to be sterke andought, whereby the common people have a speech, that ground enriched with Chalke, makes a rich father, and a beggerly sonne. Yet this is meant by the barren clay ground, not the barren Sand, especially a mossie, spewing, and hungry Sand: for it is true that chalke eateth, fretteth, and seedeth upon the fruitfulness it hath begot, when it wanteth grosser matter to gnaw upon; but this sand soile is never empty, and chalke, so delighteth therein, that it converts the evill thereof into goodness. A little lower, not farre from the Rhase, in the Countie of Lyge, they mend their land with a kinde of slate stone, which cast upon the ground doth moulder away, and makes the ground fatter. In Lombardy they like so well the use of ashes, as they esteem it farre above any doung, thinking doung not meet to be used for the unholsonenesse thereof. Columella writeth, that his Uncle was wont to mend sandie and gravelly grounds with Chalke, & chalkie and hard grounds with grabell & sand, whereby hee had alwayes goodly Come. So do I thinke, that either land by overflowings, & salt grounds with mud, mingled with sand and grabell, will be made much better.

RICO. You have taught me sundry wayes of mending of

# 36 The first Booke, entreating

ground, I would gladly now learne the right way of plowing and sowing.

The manner of plowing.

**C**OMO. In plowing, and orderly preparing ground so; sowed, consists the chiefest point of husbandry. Cato affirmeth the first point of husbandry to be to prepare the ground well: the second, to plow it well: and the third, to sow it well. As plowing and turning up the ground, the fashion is divers, according to the nature of every soyle & countrey. All great fields are tilled with the Plow and Share, the lesser with the Spade. The Plowes are of sundry fashions, according to the diversitie of Countreies, some single, some double, some with wheels, some without; some with a great beame, some with a middle, some with a small, some with two halles or tayles, and some with one, some with a sote, and some with none at all. The parts of the Plow, are the Vales or taile, the Spindles, the Wheelboard, the Beame, the Sokethe, the Head, the Rest, the Plowshare, the Whieles, the Akerstake, the Coulter, and the Share; and these two last are of sundry shapes according to sundry soyles: so; in great firme clayes, the Coulter is made long, strong, & straight; in moist earths and sand, it is long, thin and bending; the point of it standeth before the point of the Share, and its office is to cut and divide the earth before the Share, and the Share following after is to turne up the furrow: The Share also is of divers fashions: in some soyles it is very broad, with a large wing; in some it is narrow with a small wing, and in some it hath neither wing nor breadth, but round and long like a spindle; in some soyles it standeth with the point before the point of the Coulter; in others it standeth with the point behind the point of the Coulter: now for the government of the Coulter, you are to understand, that it is ruled by certaine wedges of wood, some above, some below, and some on either side: some to put it to the land, some to put it from the land, some to put it forward some to put it backe, and all generally to hold it firme and constant.

The parts of the Plow.

In Liffand they have for their plow, nothing but a fished In Syria, where they cannot get any oxen, they use an Iron Plow, which is very little Plow. Plow is usually, that wheels for Plowes were devised by the Frenchmen, and called Plow, a German name, which exactly is printed Plow.

narati. In divers places where the ground is stiff, they have a little wing on the right side of the Coulter, which wing is to be removed to which side you list: with the red or stiffe, well pointed, the plowman maketh cleane his Coulter. When you worke, your Oren must be yoked even together, that they may draw more handsomely with their heads at libertie, and lesse hurt to their neckes. This kinde of yoking is better liked of many, then to be yoked by the hoznes: for the Castell shall be able to draw better with the necke and the breast, then they shall with their heads: and this way they put to the force of their whole bodies, whereas the other way (being restrained by the yoke on their heads) they are so grieved, as they scarcely race the upper part of the earth. And this plowing with oken is the best and most constant manner of plowing of all other: for they goe together strongly and soberly without rash twitches and uncertaine motions which hozses doe: onely you must observe that the soyle where these oren worke, be dry and firme ground, for if be moyst and spring, then by reason of their heaviness of bodie, their double drawing and their many time treading upon one ground, they will turne the earth to dirt and wyze: so that in such a case the Hoxe-plow where all goe in one line is more to bee preferred. Where hozses may be used, their use is more commodious for the plow, and the fewer of them the better: for many hozses draw too hastily, and make too large furrowes, which is not good: whereby we see the ground to be excellently well plowed in Gelderland, and about Colleyne, where they plow alwayes with two hozses, going very softly. In France, and other places, where they plow with Oren, they make their furrowes rather deepe then broad. When the ground is stiff, the coulter must be the greater and the stronger, that it may goe the deeper: for if the crust of the earth be turned up very broad, it remaineth still whole, whereby neither the weeds are killed, nor the ground can be well harrowed. The furrow ought not to exceed one hundred and twenty foot in length, for if it doe, as Columella saith, it is hurtfull to the beasts, because they are too much wearied withall: but this rule where the fields are large, is not in many places regarded, as in the Countie of

This drawing with the head, is used in the upper parts of France & Spaine.

The like is used within in Norfolk, and Lincolnshire,



Golicke, where the fields are great, their furrowes are  
 dyaloue very long. You must not plow in wet weather, nor  
 wet ground, nor when after a long drought a little raine fal-  
 ling hath but wet the upper part, and not gone deepe, As it bee  
 too wet when it is plowed, it doth no good that yare. You  
 must therefore have a regard to the temperature of your sea-  
 son, that it be neither too dry nor too wet: for, too much moi-  
 sture maketh it too duntie, and too great drynesse maketh that  
 it will never worke well: for either the hardnesse of the Earth  
 resisteth the plow, or if it do enter, it breakes it not small  
 enough, but turneth up great flakes, hurtfull to the next plow-  
 ing. For though the land be as rich as may be, yet if you goe  
 any depth, you shall have it barren, which is turned up in these  
 great cloddes, whereby it happeneth that the badde mould,  
 mixed with the good, yieldeth the worse Corne.

Dead  
mould.

Where you plowed in a dry season, it is good to have some  
 moisture in your second stirring, which moistning the  
 ground, shall make your labour the lighter. Where the  
 ground is rich, and hath long borne water, it is to be stirred  
 againe when the weather wareth warme and when the  
 weeds are full growne, and have their seedes in their toppes,  
 which being plowed so thicke, as you can scarce see where the  
 Coulter hath gone, utterly killeth and destroyeth the weeds:  
 besides, through many stirrings, your fallow is brought to  
 so fine a mould, as it shall need very little or no harrowing  
 at all when you sow it: for the old Romans, as Columella  
 witnesseth, would say that the ground was ill husbanded,  
 that after sowing had need of the harrow. Moreover the  
 good husband must trie whether it be well or no, and not onely  
 trust your eyes, which (the balks being covered with  
 mould) may easily be deceived, but trie it with your hand,  
 (which is a certainer proofe) by thrusting downe a rod into  
 the furrow, which if it pierce alike in every place, it sheweth  
 that the ground is well plowed. If it be shallow in one place,  
 deepe in another, it declares the ground to be evill handled in  
 plowing. If you are to plow upon a hill, you must plow  
 overthwart, and not up and downe: for thereby the incon-  
 venience of the steepnesse is met with, and the labour of both  
 man

Trial of  
good  
plowing.

The plow-  
ing of a hill



# of Earable-ground and Tillage. 99

man and Cattell is lightened: But herein you must beware, that you plow not alwayes one way, but sometimes, higher, sometime lower, working aslope, as you shall see cause. Touching the season of your plowing; it must be chiefly in the Spring, as the Poet well teacheth: When as the pleasant Spring, &c. For in summer the ground is too hard and churlish, and in Winter too soule and durtie: but in the Spring, the ground being mellow, is easily to be wrought, and the weeds are then best turned in, which both do good for the enriching of the ground, and plucked up by the roots before they have seeded, will never spring againe. And therefore with us, we use to begin to plow about the middell of March: but in sandy and light ground they use to plow in the middell of the winter, if the season will suffer. Plinie is of opinion, that stiffe ground also would then be stirred. A slender and lebell ground, subiect to water, would be first plowed in the end of August, and stirred againe in September, & prepared for sowing about the 11 of March. The light hilly ground, is not to be broken up in summer, but about the kalends of September: for if it be broken up asore, being barren & without turfe, it is burnt up with the Sunne, and hath no goodnes remayning in it. Wet ground, some would have broken up after the Ides of Aprill: which being plowed at that time, should be stirred againe about the 10 of June, and after againe about the kalends of September, according to Columellaes mind. But those that are skillfull in husbandry, agree that after the 10 of June, without great store of raine, you shall not plow: for if the yeare be wet, there is nothing to the contrary but you may plow in July. In the meane time, beware that you deale not with ground over-wet, as I gave you warning before. These are the opinions of the Antients and may agree with the hotter climates, but experience hath found out, and the iudiciary of more temperate soples know that there is no moneth in all the yeare if the Sunne with his drought, or the frost with his hardnesse should him not out; but the husbandman may and hath good occasion to plow his ground, in January he may plow for haye or fallow, in Februarie he sowes Beanes and Pease, in March and Aprill he sowes Oates, and Barly, in May and June he summer sires, in July

The best time of plowing.

✱

Monthly employment

and August he sailes, in September and October he sowes wheat and Rye; in November and December he winter tiggs, and thus the plowmans worke is all the yere.

R 160. May I plow in the night, if I list?

Plowing in  
the Night.

C O N O. Yea, very well, in Summer time, and in hot countries you may begin in the evening, and continue till the Sunne rise, that the moisture and fatnesse of the ground, may remaine shadowed under the clod: and that the Cattell through ouer much heate of the Sunne, be not diseased nor hurt. Now oft you shall plow the ground that you meane to sow, partly the nature of the soyle, and partly the condition of his side will teach you, as when we come to it, I will tell you: for it is not needful to stir a gravelly and a light ground, so often as the stiffe ground: yet we knowe, that land, the oftner it is stirred, the better it beares. What for some seed, you must not only tyme fallow, & three fallow your ground, but also sowe fallow it, as they vse in the fruitfullest places of Italy & Germany. In Misia & Austria they plow but twice. Stiffe ground, as they commonly do in Italy, is best to be sowed upon the first stirring: in Tuscan, upon the ninth. Thus hath every Countrey, both in this, and other matters, his fashion, according to the nature of the ground.

R 160. But may I not sowe one peece of ground every yere without resting?

C O N O. There are some grounds you may sow yearly, as in Italy, & in Austria, & likewise in some parts here about the Riber, that are fruitful either by nature, or by ouerflowing. In other places you must observe the old saying of the husband, Take not too much of your ground. Virg. would have ground rest every other yere; which if you have scope of ground, out of all doubt is best. Yet if you had the ground that is sowed every yere, his name in the old time: but commonly even the best ground requireth rest the thirde, the fourth, or (at the farthest) the fift yere. Varro writeth, that in Olymbia the land beareth every yere, & every third yere most plentifully. But if you will do well, you must let it lie every other yere according to the nature of the soile, or else sow it with hedges, that soketh out lesse the substance of the ground, as Lupines & others, that we will shortly inuent of. It is also much to be considered, whether the grain that you plow

be lay ground partly sowne, or fallow: If you break up new ground, if it be rich, heavy, and prepared for seed, it sufficeth to plow it once, and to sow it immediately, and harrow it. If it be light and gravelly ground, you must thrifallow it, specially at the first breaking up.

**R E G O.** Here you speake of diuers termes belonging to this trade, I pray you make me vnderstand them before you proceed any farther.

**C O N O.** This Act, (as likewise all other) hath certaine words peculiar vnto belonging to it selfe: and because husbandmen of good learning haue hitherto bene deceived, lest my matter should be marred with dark & strange termes, I will declare the words as plaine as I can, digressing a while from my former speech.

**R E G O.** I beseech you heartily.

**C O N O.** We take *Agrum*, a field in our speech, not for a Jurisdiction, a Diocese, or a Shire, as the old latiners take it, but with *Isidorus* & *Florent*, we count it a parcell of ground, either enuallied or pasture. *Ager*, *Arvas*, or *Arvum*, we call earable ground that is to be plowed and sown. *Varro* would rather haue it called *Aracionis* not *Salum*. The field that is called *Reuibilis*, is that which is remoued, and euer yere sowne, called of the *Greekes* *καταργητός*, because his fruitfulness continueth to the next yere, and yieldeth his crops euer yere. *Ager Novalis*, is called of *Varro*, the ground that hath bene sowne and fallowed; of *Plinie* counted to be sowne euer other yere: with the *Latines* it is counted ground newly plowed, that hath lien a yere; we according to the vulgar speech (so we must speak with the most, and in agree with the fewest) we call *Novale Agrum*, that which is newly broken up, and hath not before bene plowed, whereof continueth *Novallium Decimus*, the Tithes of newly broken up land: yet I knowe there are some learned that count it that, which after his crop lies lay. *Veruaculum* is of *Varro* taken for that ground that in the spring time is turned up, and hath bene so a while space. *Adstantum* is likewise called *Novale*, both the field that hath lien a yere, and that which is broken up the first spring: thus saith *Varro*. There is great difference whether you sow in untilled ground, or in that which is partly sown, and is called *Reuibilis*, or in that which hath lien awhile, and is broken up in the spring.

spring. Moreover, both Columella and Plinie do vse, not selborne, Vervacum, for ground newly broken up in the spring, taking their reason of the time. The field is said to be plowed, to be stirred with the plow, when it is turned up. It is broken up when it is first plowed, lying in great cloods. The second plowing is called Offring: re agri, or iterare, to plow againe or somer ttre: Tertiare, to thri fallow it or soile it. Ager iteratus, & tertius, he vsuall words with Columella & Plinie. Novare, is to change the ground, well be banded before, and to plow it and prepare it for the sowing, called winter rigging. Occare, to harrow it as Vetro smith is so to b:ake it as there remaine no clood. The harrow is an instrument crosse lettased, to b:ake the cloods withall, and to couer the seed. And of these harrowes there are diuers kinds, as some of wood, some of Iron, some single and some double: the wood harrowes are called horse harrowes, the single for the single horse, the double for the double horse: the Iron harrowes are called Ore harrowes the single for the single poake of Oren, the double, yoked Oren. Craire is likewise used in the same signification. Arare is, when that which is sowne and sowe to sowne growth, is turned in with the plow. In England it is called sowing under furrow, & is of great vse in sowing both of wheat, Peas and pease. Plinie calleth Arare, as it were Arrare, to plow often that which is sowne. Arrare, is to purge with the rake. Runcare, is to wade out of the ground noisome weeds, for which is also used Aueruncare, and Deruncare: and of Columella, Exherbare, Passinare, and Repassinare, is to digge about the vines. Passinum, is a forked instrument v:sed in the planting of vines. Lire and Occare, are almost one, where we plow, so as we leaue betwixt two furrowes a ridge, for the drie keeping of the graine, like a garden bed. And hercol is the space called Lira, a ridge, which the husbandmen call Porcas, because the place being raised high, sends the coare from the water, and Lira Hortensis, a bed in a garden. Scarnum, a balke, is the grosse earth that hath escaped the plow. Plinie willet, that there be no balke made, nor great cloods remaining, meaning the great turff that is turned up at the first plowing. Scarnusager is called Vilius V-

Scarnusager is called Vilius V-

bicus, that land which runneth all in length from West to East, which if it be more of length then breadth, and lyeth up on the South, is called Strigatus. The land it selfe is also called grosse and raw, that is not well mellowed, which hath need to be seasoned with the heat of the Summer, and the cold of Winter, and to be plowed in the Spring. It is also called rich, fruitfull, fertill: and that which is nought, and yields not his fruit, is called leane, barren, hungry, or brynish: also salt, bitter, fennish, where the water still continues: Wet, that sometime lies dry: Carbunkled, that is burnt with the Sunne, rotten and mossie. It is also called pleasant ground, sweet, blacke, rotten, and mellowed, which are the signes of good ground: but hereof I thinke I have now spoken sufficiently. But to returne where I left.

CONO. When you have broken up your ground, if it be Nowe, as I said, and not tilled before, you may sow it presently, and harrow it, and if need be, rake it. The ground that is verely solone, and that hath been spare, is to be plowed thise, according to the nature of the soyle, and the sode that you meane to sow.

RIGG. Now you have told me how to order my land for sode, I pray you let me understand the sorts of sode, and in what sort they must be sowed.

CONO. That must I do: The sode that cometh of that which the Latines call Fruges, as Pulse, and Corne, we here call Fruges, all sorts of harnell graine: which the Germans call *zuck* and *malz*, because they are gathered in their beauty, and their ripenes. Now the Latine, calleth Fruges, all things which with a man is fed. The ancient writers do understand it more largely, for all the fruits of the earth. Plinie divideth it into two kinde; into Corne that growes on earie, as Galia the Latine divideth it: the other that beareth eare, as all kinde of Pulse, and peabie. Of the first kinde, is Wheat, Rye, Barley, Widge, Oates, Buckebent or Buck, as if you will in Bucken, Rye, & Lenden Wheat though all kinde grow not in all places, nor have in every place all one name. In some places you find the Lenden Wheat, which where there is plenty of water

Of Seeds & their diversity.

Old Seede  
not to be  
sowne.

In other places they use neither oates nor Bucke. Of the kinds of Pulse are these; Beanes, Peason, Lentiles, Chickes, or Fitches, Tmes, Lintels, Lupines, and such like. And though there be sundry sorts of seede, and every Country hath his kinde, and sowes such as best agrees with their nature: yet generally this is to be regarded, that you sowe none that are old and dyed, but the newest: for old seed both oftentimes, as they mixe, change their nature; as the seed of Colicworts, that being sowne, turneth to Rapes; and Rape seed likewise into Colicworts. The seed of the first yeere is best, of two yeere old worse, and of three, worst of all, the rest is barren and naught. The best seed also is that which is wartiest, and lyeth in the bottome; and such as is full, and bring broken, hath a good colour: such as is wrinkled, and thin in the eare, is to be thronie away. There is also another necessary note, to have the seed from strange ground, and from the worse to the better, and not to the contrary; nor from cold Countries into hot, nor from the southward to the slow, and to beware that it be not bitten with Birds, or Ants. In England the best experienced husbands will elect their seede, especially the which they call their white seede, which is the Wheat, Barley, or Oates, either from that which is gleaned, or loosed from the thorne being the principall eares; or that which is battered from the toppes of the sheaves, or else that which they take from the great heape, and spreading it upon the Table, will cut off the best Cornes, and separate them from the light, and from all manner of weeds, what's ever; and then this there cannot be better seede sowne. And to prosper the better, sprinkle them before they be sowne, with the lyes of Houselike. If you mingle with your graine the seed of Beardslee, and sow it about your ground, you shall save it from the annoyance of birds. You must sow your Ringers with a squall hand, and all alike in every place, letting your foot, (especially your right foot) and your hand goe together: Wheat, Barley, Oates, and other, chiefly such as have Coles, as Melon, and Peasants, must be sowne with a full hand, but Rape seede only with three fingers.

The order  
of sowing.

# of Earable-ground and Tillage.

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R 100. A man must use his hand & percellus, as the Harper doth, to make it perfect.

C O N O. He must indeed. And as we put more water to stronger wine, than we do to small, and lay the greater burden upon the stronger man, and some stomacher requirith the stronger food, so some ground may beare much seed, and some alway with lesse: neither can it be certainly appointed, how much seed is generally to be cast upon an Acre: though I know the old writers appointed a certaine quantity to every Acre, which perhaps might serue with them: but we should soulely deceiue our selues, if we should obserue the like in every place: first, because some ground requirith more seed then other, as the ground is of stiffnesse or lightnesse: for the stiffer ground (as in Holland nere the Rhine) requirith much seed, where lighter ground requirith lesse. The timely sowing the thimer: and the later, as Columella's saith, the thicker. Secondly, their measures and Acres differ, as the thing that at this day is not thoroughly agreed upon. But now you shall heare what seeds every ground requirith.

R 100. What I long to heare.

C O N O. After long rest, of the first dunging, either Barley or Wheate is to be sown: but Wheate, though it require good ground, yet if the ground be too rich where it is sown, it will grow too rank, and lye leauge upon the ground. And therefore upon such ground, it is best to sow your Wheate after a crop of Barley, Pease, or Bucke, and after your Wheate crop, to sow it with Rye: and then againe (if the ground were not poore) with Barley. In very rich ground, immediately after the gathering of Rape seed, plow it presently for Rye, whereby you may haue two croppes in one yeere. In the like manner the good rye sown after Rye, maketh two harvests in one yeere. Pease, Rye, Tares, and fitches, and almost all sorts of Rye, requirith rich ground, which after two or three yeeres may be sown with Rye, Milum, and Rape. Rye would not haue Rapes sown, but in very well dunged ground: but we haue by experience, that after a Crop of Rye, in meane ground, you shall haue the same yeere great Rapes. Rye is and groweth goodly ground, must not every three yeere, so: two or three yeeres, that being the well dunged, you may sow Rye, or

Back,



Wheat, and after Dates. In good Pasture ground new broken up, you may sowe Dates after the first plowing, after that, Rape seed, then Barley, after that Wheat, or Rye, and at last Dates, or Rye, if the nature of the Countrey be for it. When this is done, you must either dung it, or let it lye. If the ground be mellow after Barley, in some places they sowe Millet, then Rabbish, after that Barley, and Wheat, as in Campania: and such ground is sufficiently plowed, when it is sowed in some place where Lenten Wheat is sowne, it rests three moneths, and after is sowed with Beanes in the Spring, in no other wise may you charge indifferent ground. If after two seasons of Corne, you sow Pulse or Peaseware, the barrenner ground must rest three yeeres. Some will in no case haue your sowe wheat, or Barley in ground that lies fallow. After you haue thus sowed your seed in ground thence plowed and well prepared, then must you straightwaies harrow it, which is done with a lettled instrument full of teeth, drawn upon the ground, whereby the clods are broken, and the seed covered: in some places it is done with a board tyed to the plow, which they call in latine *Lirare*. Sometime raking is needfull, which in the Spring, loseth the earth, made clunged with the cold of winter, and letteth in the fresh warmeth. It is best to rake Wheat, Barley, and Beanes thise. Forsooner, they breake asunder with the Rowler the greater and stiffer clods. Weeding is when the Corne is knotted, the naughty weeds being plucked up, deliuereth the rootes of the Corne, and seuereth it. To speak of the season of sowing, it is agreed upon of all men that there ought to be no sowing in Winter: for the Winter corne, when it is sowed before winter, appeareth about the ground sometimes within a seven night after, which if it be sowed after winter is begun, it scarcely appeareth in forty dayes after, some very folly think it better to sowe in the Spring, then in Autumne. Plinie writeth that in Trencis the Harvest being in, they haue sowed in the coldest of winter, and raking their ground in the Spring, haue had an excellent good crop after. As for our best seed, there are some harder, that are able to abide the winter, which are sowne in hot Countreies, as Virg. saith, about the setting of the Trenches, which Colum. intermanneth to be

Harrowing.

Raking.

Rowling.

The time for sowing.

be about one and 30. dayes after the Autūne Aequinoctiall, that is, the 9. dayes of November: and in France and Germany in September, & the beginning of October, as Rape seed, wheat, Rie, Winter Barley, that are nourished in the blade all Winter, & grow up towards earing in the Spring. Some there be that will you to sow before, only in dry ground and hot Countries.

Some againe would have you to sow in cold Countries after the Autūne Aequinoctiall, in hot Countries later, lest they should flourish before winter, and be destroyed of wormes, or blasted. Some on the other side make haste, saying, That soone sowing sometimes deceives, but late sowing ever. It is good reason to sow timely in wet grounds, that the seed rot not with too much moisture: and later in dry grounds, lest lying long and not sprouting; it come to nought. Also, in timely sowing, to sow thicker, because it is slow in rooting: and in later sowing thinner, lest with the thicknesse it be choaked. Summer seedes, which are sowed before the rising of the seven starres, and in the Spring, are Beanes, Pease, and such, Pulse, Millet, Panicum, Sesamum, Summer Barley, Flare, Hemp, Dates, Bucke, Sporis, and such other, are sowed in the Spring time. In Asia and Greece they sow all, as they say, at the setting of the seven starres. Now, although there be certaine precepts of the time of sowing, and how much seede is meete for every quantity of ground, surely, they might as I have said before, for their owne Countrey and nature of their ground, give a kinde of guide, but to determine anything herein certainly, there is no man that can doe it, but the ground and every mans owne practise is herein the best Master. One ancient generall rule of husbandry there is, wherein we are warned in cold Countries to sow late, in temperate Countries sooner, & in our hote Regions soonest of all. Erastosthenes saith; that India is subject to much raines in Summer, & that then they sow flar, Sesamum, Rice, & Millet: and in Winter, Wheat, Barley, Peaseware, and other fruits that we have not. Hesiodus, the Prince in his time of husbandry, bids us to sow according to the custome of Greece, his naturall Countrey. Virgil, Cato, Varro, Columella and Pliny, appoint their rules for Italy, whose mindes if you will have followed in all other places, you shall but seeke to cover every

Late sowing  
alwaies  
saileth.

Summer  
Graine.

A generall  
rule.

Wheate.

ry pot with one cover. But to come to the matter, sith the seedes of sundry natures requiſe sundry times of ſowing, & diuers ſorts of ordering, & that herein euery Countrey hath his guise, I will here (obseruing such customes as are most generall to them all) leuer ally thein you of euery seede by him selfe, and so declare unto you the order of their sowing. And first, amongst all the fruits & graine that the earth doth yeeld for our sustenance, the chiefest place is rightly giuen unto wheat, called in Greeke *trigon* in Italian Grano, in Spanish Trigo, in Dutch Weyls, in French Fourment, as a graine most needfull for man, & therefore most fruitfull, because God hath ordained it to nourish man withal. It is wonderfull what yeild it hath borne of in some Countries. Augustus his Deputy sent him from Bithace in Africa of one graine of wheat foure hundred branches. And Plinie witnesseth, that in the same place, one bushell hath yeilded a hundred and fiftie bushels.

**TRIGO.** There are that hold opinion, that this which the common people call Wheat, the Germaines Weis, and the Hollanders Terce, is not the true Wheat, but a kinde of Rie, and that the true Wheat which the Italians call Grano, groweth onely in Italy and in Spain.

**CONO.** That which growes in Italy and Sicill at this day, differeth not from ours in fashion, colour, nor stature, though the graine there be somewhat great, and the stowage more clammy, which maketh it that it cannot be long kept, specially about Rome. And whereas our Wheat is either bearded, or pollard, theirs is altogether bald: we call it bald or pollard that hath no haire upon the eares. And that we call the Aune, which groweth out of the eare, like a long pitch, or a Dart whereby the eare is defended from the danger of Birds. With Vng. the Aune is used for the corne, as the parke for the wheat. Gluma is the husk of the corne, whose top is the Aune. Frix is the small graine, lesser then the corne that growes in the top of the ripe eare. To returne to the wheat, I graunt there are some that doubt of this wheat of ours, such hath been the iniury of the time (as all things almost forgotten) we scarcely know how to name the food that we daily feed of. For my part, I will follow common use, as a Philis in speech. The old writers haue written of sundry sorts of

of wheat, whereof they haue thought that most needfull to be sowne, which they called Robus, as the fairest and waightiest. The second called Siligo, they used in their finest cheate. The third, they called Trimestre, because it would be ripe in three moneths after the sowing. Though Columella allow no such Trimeton, growing onely in the cold countries. In Thracia, they haue a kinde that is ripe in two moneths, and is covered with a number of husks, against the extreame cold of the country. In our countries also we haue Wheat and Rie, that we sow with our Summer graine, as we likewise doe Rape seede, but to no great commoditie: for the winter seeds do farre exceed them; and being nourished in the earth all winter, they proue as Theophrastus saith, of more substance and profit. Amongst all these sorts, Plinie recounteth the wheat of Italy to be best, both for beautie and weight. The use with us onely two sorts, differing in this, that the one hath smooth eares without any beards, the other with long beards; Aanes, very round and sharpe, not much unlike to Winter Barley: in all other properties they are both alike. But to make a reconciliation of these words and doubtfull expositions, I will shew the ancient and present practise of the English, who are masters of as much and as many severall sorts of wheat as any Nation whatsoever, therefore first for that wheate which the ancients called Robus, the English call it Holstraw wheat, because there is no hollownesse in the straw, but a strong pith which runnes through from knot to knot, this is of all Wheat the strongest, the waightiest and yieldeeth the most slowe, yet it is but browne and darke coloured: it prospereth onely in rich ground, especially a stiff blacke clay, at the third plowing it must be sowne under furrow, & the greater the clotts that cover it, the better; two Bushels & a pecke will sow an Aker of the largest size.

That which our Ancients call Siligo, the English call Polard or Pole-wheat, because it hath no Aanes or Beard at all; the straw is hollow, the corne is large and weightie and of a brighter and paler colour then the former; it is usually sowne under furrow upon the richest clay at the third eering, and sometimes upon the Annames after pease, but then the ground must be rich and strong; two Bushels & a pecke will suffice an Aker.

That which is called Trimenon or Trimestre the English call Ograve or Red-wheat, it is small and cleaner then either of the former and yeldeth a whiter and purer meale, it prospereth in any well mist hassell earth, and is sowne immediately after the Bease are reaped, vpon the same ground, and at the first plowing, and is sowne aboue the furrow, and reasonably harrowed after; two bushels are sufficient for any Aker.

Now ober and aboue all these the English have diuers other wheates which farre exceed any of the former both in outward beautie and inward purenesse of speale, the first whereof they call Flaren wheate, being outwardly more white then the whitest Flar, and inwardly full of the whitest floze, so that it yeldeth little or no branne, this wheate (as the former) is sowne on the Inname after Bease and aboue furrow, and though the yeld be not so great as the former, yet by reason of the puritie & whitenesse it yelds an equall profit.

They haue also another wheat which they call (by an allusion to the ground whereon it is sowne) Chilter or Chilterne wheat; for it prospereth onely on hils and high places, being stony, chalkie, granelly, and hauing many times not aboue a foote of fine earth to rote in: it is equall, or indeed beyond any of the former for purity and finenesse, and not much inferior in yelding: it is sowne in September and October aboue furrow, after the third plowing, and two bushels is a sufficient quantity for any Aker; Thus much be spoken for the English custome; now for the generall practise of other Nations.

All wheat is sowne in September, the season being faire, the ground thrice plowed and well raked or harrowed, although you may sow it very well after once plowing, vpon ground where Bease, Tares, or Bucke hath bene newly had off, in a good soyle. Plinie and Columella would haue you sow of Wheat and Rye, sixe bushels vpon an acre: but as I said before, this measure is to be measured with reason. We at this day sow not so much Wheat vpon an acre, as Rye, nor so much Rye as Barley. It is best, if the winter be like to be cold, to sow the sooner: if warme, the later. Wheat delighteth in a leuell, rich, warme, and a dry ground: a shadowed, weedy, and a hilly ground it loath not, though Plinie say the hill yeldeth harder Wheat, but

no great stope. After it is sown, it putteth out a great company of small roots: and appeareth at the first by o: blade: it hath sundry stalks, but such as cannot branch all the winter, as other winter corne is, it is nourished in blade: When the Spring draweth on, it beginneth to springle: upon the third o: fourth ioynt thereof, commeth out the eare, which first appeareth inclosed in the blade, it slowzeth the fourth o: fifth day after: if it grow too ranke at the first, it is eaten downe with cattell, o: in some place mowed: it is afterwarded: it slowzes about the 10. of June, sooner o: latter, as the yere falls out, even at one time almost with the Vine: two noble slowzes, with comfortable savour flourishing at once. Varro affirmeth, that the wheat lyeth 15. dayes in the blade, flourisheth 15. and ripeth 15. After it hath slowzed it wareth greater, and as Theophrastus saith, is within fortie dayes after full ripe, wherewith the latest they reape in the eight moneth. Other say in sixe and thirtie dayes, and reaped in the ninth month. It never eares, till all his ioynts o: knots be growne. There are foure ioynts in wheat, as Plinie saith, and eight in barley: but in our country and our dayes, both Wheat, Rie, Barley, and Dates, haue but foure, and not that allwayes. Befoze the full number of the ioynts, there is no appearing of the eare: which when it commeth, be- ginneth to slowze within foure o: five dayes, and so many, o: lit- tle more, it saveth. When the slowze is gone, the graine be- gins to swell, and in foure o: five dayes after, to ripe. The blade of the wheat is sometimes like a sedge, but narrower then the barley: the spindle, stalk, o: straw thereof, is swe- ther and gentler, and not so brittle as Barley. It is closed in many coates. The stalk that beareth the eare is higher then that of the barley: the eare groweth more upright, and farther from the blade, the chaffe is softer, sweeter, and more full of iuyce, the eare of wheat is out of order and uneven, as well of the hollow, as of the bearded, whereas Barley hath his eare of iust number, and in perfect order. In Hadria, it is said a graine of wheat is equall in quantitie to an eare of our wheat. In Babylon, the blades both of wheat and barley, as Herodo- tus reporteth, are foure inches broad. Wheat, as Columella writeth, after the third sowing, changeth to Rie, which hath



Rye.

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beene knowne in Germanie, as I sayd befoze in many places. Of wheat is made Amyl, the meaning whereof, Cato and Dioscorides teacheth. After wheat we sow with vs Rye. There are that thinke it to be that which the Greekes call <sup>Barley</sup> ~~Barley~~, though Homer take <sup>Barley</sup> ~~Barley~~, for a kinde of feed for horses, but that cannot be, for there is no graine what euer so unwholsome for an horse as Rye, having that purgative qualitie in it, that it maketh a horse scower to death. Some others take it for a kinde of wheat. Herodorus sayth, bread was made of it. Of Laurentius it is called Far. Of Gals, Siligo. Divers learned men call it Secale, and take it for Plinies farrage. The Frenchmen call it Srgl. The Dutchmen Rock. The Italians, almost as the Latines, Sagala: the graine is something blacke, and maketh blackish bread. But to passe over all controversies, I follow the Country speech, and take Siligo for our common Rye, which is sowed immediatly after wheat, about the end of September, or in the beginning of October, in good ground: in sandy & gravelly ground, it is sowed in February, and called Summer wheat: it requireth the best ground, warme & salt, and refuseth not light ground and gravelly, so it be heaped with dung: it loveth wet ground as ill as wheat, both require to be sowed in deepe mould & plains soyle: but Rye is sowed a little after wheat, in the sowing whereof you must occupy a third part more than of wheat: it prospereth lightly in any ground, and many times with the yeld of a hundred for one. It must be sowed after the third plowing, as wheat, and harrowed much after the same sort, the stalle or scale thereof, is smaller than the wheat stalle, taller, and stronger, his eare hangeth downewards, and therefore more subject to blasting, because it receiveth & keepeth the water that falls while it bloweth, and suffereth the violence of mists & frosts: the straw thereof is gentle and flexible, serving for stines and coverings of houses. Thus much for the opinion of the Ancients & ancient customes; but to come to the present practise of England, where much of this graine is sown: they observe to sow it about the latter end of September, & rather before wheat than after, because it desireth the fairer & dryer season, for wheat loveth a shower, & a sticking mould: but Rye is so contrary thereto, that they say, it will bosome in the hopper, that is, the smallest raine kills it in the sowing. Rye is to be sowed in



# of Earable ground and Tillage.

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in hot sandy grounds, as the third plowing, and prospereth also upon any light hassell earth which lyeth drie. And howeuer the opinion of the ancients and some moderne utterly damne and disallow it for any clay ground, yet the English finde and know that it will flourish upon any rich Clay where the mould is made (by oft plowing) d.y. and mellow; and they finde that one Aker of Clay Rye well handled is worth two Akers of any Sand-Rye whatsoever. Rye must be sown in an indifferent furrow, and well harrowed, and the mould thoroughly broken: two Bushells is a sufficient quantitie of Seede for any reasonable Aker\*.

Now followeth Barly, accounted in the old generations Barley. among the worthiest sort of graine, and not of small estimation at this day. The Italians call it Beade or Beave, or Orza: the Spaniards Ceuada: the Dutch men Gerst; the French men Orge: the Grecians *μυδι*: and though it be used in Greece and Italy, and such warme and fruitfull Countries for Cattles food, as Homer also witnesseth, yet in the Northern Countries it supplies the place both of bread and wine. There are of it two sorts, Hexastichon and Polystichum, whose eares are thre or foure, & sometimes five square, and diuers eares springing from one graine, every eare containing aboute fourescore graines, so wonderfull are the gifts and blessings of God. The other sort is called Distichon, having in the eares but two rankes of eares onely. Again, there is one kinde of it to be sown in winter, another for summer. The winter Barley is of better yield, but it is some hurt, specially with much wet and frosts following. There is nothing more hurtfull to winter Come specially Barley, Rape seede, and Rye then the wet of winter, nipped with often frosts, and after a warme thaw, to be presently frozen againe: both the sorts of Barley require ground that is very rich. Winter Barley, after two or three plowings, is to be sowed in September: Summer Barley in March or Aprill, after twice plowing; and many times nere fifty times, after once plowing in the sowing, you must occupy more seed by halfe, then in sowing of wheate: it requireth a mellow and a fat ground, and therefore is best sowed, where the ground is most manured. The winter Rye flowereth in May, and is ripe in June at the furthest. This

hinde was not wont to be sowed in these places, but great numbers, now moved by my example, do use and receive great gaines by it. The summer Barley in many Countries is ripe and ready in thre moneths after the sowing. In Aragon, as Plinie writeth, it maketh double harvests every yeare. The seventh day after it is sowne, it commeth vp, and one end of the shee tinneth downe in rote: the other, the sooner springeth, and cometh up in the blade: the greater end of the graine maketh the rote, and the slenderer the slowe. In other graine the rote and the blade spring both from one part, the blades of both kinds are rough. It must be gathered with moze speed then other graines, for the straw of it is very brittle. Of Barley is made, as Dioscorides writeth, both Beere and Ale.

R 1 60. I like your Beere you haue excellently well, I pray you tell me in what sort you make it?



C 1 60. I will not hide my cunning in this matter, and herein I will follow the custome and order of the English who are the great makers of all Christendome in this art; and both freinner, the low Countries and other Nations are but their Imitators; They first turne their Barly into Malt in this manner. They take a good quantity of Barly and put it into a Cellerne or fat, and so steepe it in water the space of thre nights, then draine it from the water and let it drye a day, then lay it out a faire stowe in a great thicke heape or centre, and let it lie thre nights more, in which space it will sprout at one end (for it must not sprout at both:) then they spread it very thin all over the stower, and either with a shobell or the hand it must be turned and tossed twice or thrice a day, for the space of foure or five dayes more, for to make perfect Malt it must haue fift thre weekes fat and stowe; then they drie it upon the kilne with a gentle fire, of sweete straw, for any other suell yeilds too stronge a smoake and gives the Malt an ill taste: After the Malt is drie, cooled, rubbed cleane skinned or winnowed, then it is sent to the Mill and ground according to the proportion of the Brewring, which if it be ordinarie house hold Beere, then they draine of every quarter of Malt, thre hoggsheads of Beere; but if it be for extraordinary strong Beere, then to every hoggshead you shall allow one quar-

The mas-  
king of  
Malt.

ter of Vault, a pecke of Pease, halfe a pecke of Wheat, and halfe a pecke of Dates. Now for the brewing of this ordinarie Beere, (after the Malt is ground) they put it into a mash, fat, and the liquoz in the Lead being ready to boyle, put it to the Malt and mash altogether, let it so stand an hower, then drayne the liquoz from the Malt, & put it in the lead againe, & ad to it for every quarter of Malt a pound & an halfe of hops, & boyle them ouer for the space of an houre, then cense the liquoz or wort from the hops through a Traite Sine into the Cooler, which standing ouer the Cuyllfat, you shall let the wort runne there into: then put to your barne, and after they haue wrought then beate them together, and doe this so: viders times together, then tunne your Beere into hoggsheads, let it purge well and after close them up. This Beere may be drunke at a fortnights age, and is of long lasting. In this manner you may brew strong March Beere, altering onely the quantitie of Malt, and also strong Ale with abatement of Hopps\*. There is made of Barley Alica, a reasonable good meat, and Pisan. Now they must be made, you may read in *Zeai* Plinie: Next to wheat and barley, followeth Zea, which the common people, both in Italy, Spaine, and Flanders, call Spelta, the French call it Espelra; with Honor is greatly commended, *sidap & dpuas*, the fields that beareth the Zeam, being as Galen saith, the meane betwixt wheat and barley, for he hath the qualities of each of them, and is of two sorts, the one in stalk, soynt, and eare, like to Wheat, and carrieth in every huske two seedes, and therefore is called *Alina* or *Alina*, the other having both stalk and eare shorter, and but one graine in every huske, growing in rankes, and in the top resembling Barley with his sharpe flanes. In Italie, specially about Mirandula and Concordia, it is used in protender for Horses, it is not in these Countries in use. I would sow it here, sith the ground will serue for it, and that both bread & drinke might be made of it very well, but that it is something troublesome to grind, because of the double husks. It desireth a moist ground, rich and good, it is sowed after the same manner that Wheat is sowed in September or October: it bloweth in June, and is ripe in July, very mete for colde Countries, because it can abide

of those straws and stowes. The next is Far, which was a general name to all corne, as wheat Far, Barly Far, and Rye Far, and when mills were not yet devised, they did beat their corne in morters, whereof came, that the meale was called Farina, yet after, was the name of Far, given to Adoreum, though Columella called it allwayes Far Adoreum, making foure sund. y. sorts of it. The French men call it Brance, the Italians Sandala, the Spaniards Escandis, the most people of our Country call it Farro, the Dutch Keskorne, whose graine is very like wheat, but that it is shorter and thicker, and where wheat hath a clift, there hath it a rising. It is heavier then barly, and lighter then wheat, it yieldeth more meale then any other Corne. The people of Rome as Plinie saith, lived with this Corne at the first three hundred yeeres; it groweth in Egypt without mane, with a greater eare and a waightier: it hath in the stalle seauen icyns, and cannot be clenched except it be parched. France hath two sorts thereof, one of a reddish colour, which the people call red wheat, the other whiter, which they call white wheat; the eare is three square; not unlike to spelt. In Italie they make potage of it for their labourers. Far or Adoreum, Virgil would have sown before the setting of the seaven starres, after the Acquinoctiall of Autumne: but in wet and cold barren grounds, it is best to sow it about the kalends of October, that it may take deepe root before the freezing and cold in the winter. It is sowed in low ground, watrish, and chalky: after it is sowed it must be harrowed, raked, and weeded: the raking loseth in the spring, the harrow shades of winter. In raking or harrowing, you must take heed, as I sayd before, that you hurt not the rootes: weeding when it is knotted, severeth the Corne from all annoyances. The French men sow it in hollow furrowes, because it is very subiect to blasting, thinking thereby to preserve it both from blast and mildew. To sow it in hie ground is discommended, though it prosper there well enough, because cattle cannot alway with it, for the sharpnes and roughnesse of the eares, and because it requireth great labour in getting off the husks, which if it be not cleared of, is neither good for man nor beast: the uncleane chaffe both hurt with the Cough; the Cattles lungs. Amongst the winter sodes, Rape sode both challenge his place, which I

take to be the seed of the Rape, which Plinie maketh for his third kinde. and wilde, whose roote, like the Raddish, runneth in length, the leaues being tusse, like the other kindes, and the stalk bushy and full of branches: the roote of it is good for nothing, but is onely sowed for the seede, whereof they make Oyle, seruing for paye mens Litchins, salts, and lights, specially in Germanie, where they want the Oyle of Oliues, whereby ariseth great gaines to the husbandman. In the hot Countries where they haue other Oyle enough, this is of no use, but in sowing of Birds: it is sowed in the end of August, or in September: howe be it, sometime it is sowne in March among the Summer seedes, but to nothing so great a profit: it is cast into very rich ground, or well manured, thrice plowed and well tilled; it must be sowed very thin: for being a very small seed, it must not be sowed with the full hand, as wheat is, but onely with three fingers. It prospereth also exceeding well in those grounds which are newly wanne from the Sea, and both taketh from them their overmuch saltnesse, and bringeth them vnto fertillitie, and therefore it is euer the first seede that is to be sowne vpon such earth. It slowzeth in March, or thereabouts, as the year is forward, and continueth his sloweing a long time: the slowe is yellow, and very swat, wherein Wæs doe much delight: as soone as it hath left sloweing, it is presently ripe: it groweth two cubits in height, bearing a plentifull seede in little small eods, it tendereth for one bushell, a hundred bushels of seede. It is of two kinds, male and female, the one hath a longe roote, the other a round, and of both the husbandman maketh a very good seede.

The Summer seedes are almost all such as are ripe within three moneths, or soone at the uttermost after they are sowne, and some of them soone, if the ground and the weather be good. Among the Summer seedes we will first talke of graine, and after of pulse. Of the graine, Dates are the first that are sowed, though Virgill count them barren and Plinie counteth them rather wædes then come, affirming, that Early when it prospereth not, will many times turne into Dates: yet the Frenchmen and the

for

Oates.]

for Horses, and food for Cattell. Plinie also witnesseth, that the  
 Germans used to make pottage of Dates. And Dioscorides  
 maketh mention of Dater pottage, *πρωτος εν βερμυρις*,  
 pottage of gwell is made of Dates, it is called of the Greeks  
*βρωμας*. in Italian Vena, in Spanish Avena, in French Avoine,  
 in Dutch Haver; which though it grow not commonly in Italy,  
 yet upon Monte Ficelio, and in the kingdome of Naples about  
 Siponto it is found. Wee have amongst vs two kindes of them,  
 one full and weightie, serving in bare partes, to make bread  
 and drinke of, specially if it be medled with a little Barley, and  
 this kinde prospereth in rich and new broken up ground exce-  
 dingly. The other kinde is lighter, which the common people  
 call Owen and Bunnhaber, it is very light, and yeldeth but  
 little slowze nor food: it groweth upon sandy and barren grounds,  
 and serveth well for Cattell and for Horse: both the kindes have  
 bushy tops, from whence hangeth the seede, in likewise resem-  
 bling the grasse-hopper: the slowze of it is white, and from one  
 graine, there springeth divers stalkes: with Dioscorides, Bro-  
 mos, is a kinde of Dats that resembleth Wheat in the stalk  
 and the blade, and groweth like wilde wheat. Theophrastus  
 calleth it *αγριοστα*. The Date is not dangerous in the choyce  
 of his ground, but groweth like a good-fellow in every place,  
 wher no seede else will grow. Of the like disposition is Buck or  
 Barchoheat, unknowne to our old fathers. It is called *παγος*,  
 Barchoheat, or *μαλαμυρον*, Blackewheat, though *μαλαμυρον*  
 signifieth another graine. I had rather call it Barcho-  
 wheat, because the graine thereof is threecornerd, not unlike the  
 Barchoheat both in colour and forme, differing only in the smal-  
 nesse. The stalk is very great, and straked like to the greater  
 earne: it hath many branches, with a bushy top a great sort of  
 white flowers in a knop, like the flowers of Elder: it slowzeth  
 long together, & after appeareth the graine, first white and grie-  
 nish, in shape threecornerd: after they be ripe the colour chang-  
 eth to blacke or brownish, like a Chestnut. This graine hath  
 not long since bene brought from Russia and the Northern parts  
 in Germanie: now it is become common, and used for fattning  
 of Hogs, and serveth the comon people in deare seasons, to make  
 bread and drinke withal. It may be sowed in any ground, and  
 is

Buck.

is sown in April, May, and in June, after the reaping of Rapes  
sow. You must sow lesse of it upon an Acre by a fourth part  
then of Wheat or Rye : it is much used to be sowed upon the  
ground where Rapes grow, whereby the ground both yeld a  
double crop in one yeare. When it is sowed, it cometh up if it  
be moist weather, within foure or fife dayes after, having two  
leaves at th: first appearing, not much unlike to Pursaine  
Some again preferre the other Miller, called in Latine, Millium, Miller.  
in Greeke *κρυζανθον*, in Italian Milio, or Miglio, having as it  
were, a thousand graines in a care, as Festus saith to anolo;  
in Spanish Mijo, in French Miller, and in Dutch Hyers, where  
they make pottage of it and bread. The Russians and Muscovi-  
tians are cheifly nourished with this kind of pottage, which they  
make with the stowe mingled with milke, and the blood that  
they let from their horses. The men of Indy, as Plinie sayth,  
know no other graine but Barley and Millet, which grew in  
his time plentifullest in Campania, it is the best leaven that  
may be made, neither is there any graine comparable to it for  
waight, that more increaseth in baking: for of one bushell hath  
bin drawn threescore pound of bread, and a bushell of sodden  
meat, made of three quarters wet and unsod. It is sowed at this  
day in every place, though very little in the low Countries : it  
groweth with a stalke full of ioyns, a cubit high, a lease like a  
ræde, a round & a small seede hanging doونه in long rimmes  
with many tops: it groweth sometime seven fote high, it delight-  
eth in a watrish moory ground, and in gravell, so it be not w-  
then overslowne, it hateth dry and chalkie grounds. Some give  
counsell to soire it first in a cold and wet ground, and then in a  
hot ground: before the Spring you must not sow it, for it delight-  
eth much in warmth. A little seede of it is sufficient for a great  
deale of ground : if it be sowed thicke, it comes to nought : a  
great handfull will serue a whole Acre, wherefore in raking,  
you must rake out what is more then needfull: an acre beareth  
fourtie bushels, if it be well sowed, every seed yieldeth about a  
pottell. It is forbidden to be sowne among Vines or fruit  
Trees, and must continually be weeded and raked. When the  
eare is full growne, it must be gathered with the hand, and  
dried in the sunne, first the hot weather shatter the seedes. This  
graine



graine may very long be preserved, for being well laid up where the wind cannot come, it will well last an hundred yeares. There is another like graine that they call Indian Millet, with a great graine, and a blacke and big ruddy stalk, which was first brought into Italy in the raigne of Nero, which (as Plinie saith) was called Loba, whereas Lobz are rather the Cods of all Pulse, and Lobz, the manes and toppes of Millet, as it appeareth by Theophrastus. Panicum is called of the Greeks

Pannicle.

<sup>ἑλάνης</sup> of the Dutch Plennich, or Heidengreis, of the Italians Pannacho, the Spaniards Panizo, the Frenchmen Paniz, so called of the little Pannicles, wherein the seed lieth. It cometh up like Millet, with many leaues, and stipes, glittering with a reddish bushie top, full of seeds, like Mustard seed, some yellow, purple, blacke, and white: it must be ordered in all thing almost as Millet: being sowed in Summer, it is ripe in fortie dayes after: in other places sowed in May in wet ground, it is to be gathered in September. The harvest, and the use of it, is almost all one with Millet, neither can it, as Millet, be sined without parching: when it begins to spindle, it must be well weeded least the weeds ouergrow it: being well dressed with Cheesill and Milke, it maketh indifferent good meat: in bread it is not so much used as Millet, for the bread is very drie, and crumbleth like Sand or Ashes, being altogether without moisture or cleauing: but the common people remedying that with Lards or Oyle, do make a shift with it as well as they can. They that dwell about Pontus, are said to esteeme it above all other food, as the people of Nauarre doe at this day. In many countries it is used onely to feede Pigeons withall.

Rise.

Of the number of outlandish graine, is Rise, in shape as Theophrastus saith, like Darnell, having a bushie toppe like Millet or Pannicle, but no eare: his graine is like the kinde of Barley, called Zea, the leaues are thicke like the leaues of Leekes, but broader, the stalk a cubit high, the flower purple. This graine is but geason in France and Germany, but in Italie and Lombardie common, where it is called El-riso, and Menestro Del-riso, the French men leaving the first letter, do call it Riso, the Greeks <sup>ῥίζα</sup> the Spaniards call it

Arroza.

## of Earable ground and Tillage

67

Arrois. Pliny supposeth it to be engendred of the water Hedge. There is made of it Furmentie, is Horace calles it, Rife Furmentie. It is sowed in March, as Millet or Pannicle is. The Indians (they say) doe hushe it before they sowe it, to make it the lighter of digestion. And as Strabo reporteth, they make drinke of it. Next is Sesamum named with the Grækes *θησαυρος*, Sesamum, the Italians Sesame, the Spaniards Aionioli, the Frenchmen Jugiolin. In times past, it hath bene more used and greatly commended, both of Columella and Pliny. At this day it is knowne to a very few, as a great sort of seedes else are, in so much as the very come that we daily feed of, we scarcely know what it is. Some reckon it in the number of Graine, and some of Pulse: the stalk thereof is not like Millet or Pannicle, full of ioynts, but plaine and smooth, like a reed, the leaves thereof ruddy, the seede white, not so bigge as Linseed, and is contained in little knops like Poppie: it is sowed before the rising of the seauen starres, after the manner of Italy. Columella sayth, that he hath sene it in Cilicia and Syria sowed in June and July, and reaped in Autumne. It requires a mellowe blacke mould, though it will grow upon good ground, sandy ground, and forced ground, raine is hurtfull unto it after it is sowed, whereas if both good to all other Graine: no great Cattell nor Wormine will meddle with it, it hurteth ground very much, because of the great quantitie and thickenesse of the stalk, and the number of the rootes. Pliny writeth, that it was brought out of India, and used both for meate and oyle. But to returne to such graine as we are acquainted with. Amongst the summer seedes is Biscellia or massine to be reckoned. The husbandmen doe sometime make a medley of sundry sorts of seedes, and sowe them partly for Cattell, and partly for hope that though some of them faile, yet some will grow. But here must you beware lest you mingle not winter Come and summer Come together, so that were a great oversight, and one of them must needs perishe. Some backe may well be mingled with Dates or such as well for brewing, as for feeding of Cattell, and Linseed or other like Pulse may be mingled with Dates, as very good for heales. They are to be sowed in time and places, as I have tolde before in my generall entreating of them.

Also

Also Wheate and Rye may well be mingled together and bringeth forth an excellent Pastine, wherof is made very good household bread.

R I G O. You haue well satisfied me for Graine and Cozne, you may now (if it please you) doe as much in Pulse.

Of Pulse.

C O N O. Pulse or Peedware, called of the Greekes *δραγμα*, the other parts of the frutes of the ground: of these there are sundry sortes, as you haue saene of Cozne: some put Millet, Pannicle, and Sesamum to this kinde, because Columella sometimes puts them in the number of Graine, and sometime of Pulse: but I following Plinie herein, doe put them amongst the kindes of Graine, accounting those to be Pulse, whose seedes are contained in coddies, as Beanes, Pease, Lentiles, Lanes, Chyches, Fitches, and such like, which all are to be sowne in the spring. Of all kinde of Pulse, the greatest honour is due to the Beane, as Plinie witnesseth, as to a Pulse that is most commodious for man and beast. In Greeke it is called *αυρα*, in Italian and Latine Faba, in Spanish Haus, in French Fève, in Dutch Bonen. This amongst all other Pulse groweth in height without any stay, it hath a thicke lease, a crested flower of diuers colours, spotted white and blacke, which Varro calls the lamen-table letters: it hath a long codde, his fruit within broad, like the nape of a man, of diuers colours, it appeareth at the first with many leanes like a Pease, and not with one alone, like Wheate. It is sowed first of all other Pulse in the spring time, as Virgil will haue it, and timely, because of Fabalia, which is the offall of the Beanes, for both the cods and the stalks, is a fode that cattle much delights in. Colomella reporteth how he heard a skilfull husbandman say, that he had rather haue the offall of Beanes timely sowed, then the Crop of that which is ripe in three monethes; you must sow them in the encrease of the Spring, and after once plowing. It is said, that if they be enclosed in Goates dung and sowed, they will yield great encrease, and the pulps that are eaten or gnawed, in the encrease of the Spring will fill up againe. If they be sowed nere to the roots of the Trees, they will kill them. Some hold opinion, that if they be steeped in Capons blood, they will be safe from all hurtfull toyes, and that layed in water a day or two

before

befoze they be solwen, they will grow the sower. The Beane  
 delighteth in rich and well dunged ground, as all other Pulse  
 doth: wet and low ground it doth not refuse, though all the rest  
 desire drie ground; it waileth not weeding, being able to over-  
 grow them. Of all other Pulse it onely springeth with an up-  
 right stalk full of knots, and hollow. And whereas all other  
 Pulse are long in flower, this flowereth longest, flowerings soe  
 dayes together, one stalk beginning when others end, and not  
 all at one time as wheat; they rod in sundry dayes, the longest  
 part of the stalk flowerings first; and so upward still in order.  
 So fruitfull are they in some places, as you shall find one stalk  
 to beate a hundred beanes. The Beanes like close to their  
 Cods: the blacke in their tops, the Latines call Hilum, the  
 cods Valvuli, the woymes that breed in them, Mida, Lomentum  
 is the meale which the people in the olde time did use for the  
 smothering of their skins. Fresa Faba was the beane that was but  
 smally broken and hulled in the Mill. Refrina was that which  
 they used to offer in sacrifice for good lucke with their Corne. It  
 is good to keepe your Beanes, in the wafer of Saltpeter, a day  
 befoze you sow them: you shall keepe them from Wyrrels, as  
 (Palladius saith) if you gather them in the wane of the Moone,  
 and cherish them, and lay them up befoze the encrease. Beanes,  
 and all other Pulse doe mend the ground that they are solwen in.  
 The next to beanes in worthines and sowing, is Pease,  
 called in Greke *πίζος*; in Italian Pise, and Piselle, in Spanish Pease.  
 Aruers, in French Pese, in Dutch Erretten, a Pulse that grow-  
 eth with hollow stalks and full of branches, lying upon the  
 ground, many leaves and long, the cods round, containing in  
 them round seedes and white: though Pinie write, that they be  
 cornered as Chech, of which sort we have some at this day blew-  
 ish with flowers in shape like the Butterlie, purple coloured to-  
 ward the midd. There are two sorts of pease, the one sort covet  
 to climbe aloft, and runneth up upon sticks, which with little  
 winders he bindeth himselfe, and is for the most part only solwen  
 in gardens: the other sort groweth low, and creepeth upon the  
 ground: both kindes are very good to be eaten, specially when  
 they be young and tender, they must be solwen in warme ground,  
 for they can in no wise away with cold, they are sowed eyther  
 upon

upon fallowes, or rather in rich and yeerely bearing ground once plowed, and as all other pulse, in a gentle and a mellow mould, the season being warme and moist. Columella sayth, that ground is made very rich with them, if they be presently plowed, and the cooler turne in, & cover that which the Hooke hath newly left. They are sowed among summer Cozne, commonly with the first. First Beanes, Pease, and Lentiles, then Tares and Dates, as is said before. Pease and Tares must be sowed in March and Aprill, and in the wane of the Moone, lest they grow too ranke, and slowe out of order, where as the best sowing for all other pulse & graine is in the encrease of the Moone. There are that count Pease to be the pulse that the Greekes call *ῥαβος*, the Latins *Eruum*, the Italians *Eruo*, the Spaniards *Yeruo*, the Dutch men *Eruen*, of which there are two kindes, the one white, the other red. The latter is wilde, and groweth in hedges and Cornfields: it is a small plant, having his leaves narrow and slender, his flower eyther white, or medled with purple, growing nere together like Pease, there is no great businesse about it: it delighteth in a leane barren ground, not moist, so: it will be spilt with too much ranchenesse: it must be sowed before March, with which moneth it agreeth not, because it is then hurtful unto Cattell. *Eruilia* is a pulse like small beanes, some white, some blacke, others speckled, it hath a stalke like pease, and climeth like a Hoppe, the Cobbs are smooth like Peascobs. The leaves longer then the leaves of Beanes: the flower is a pleasant foode to Bees. In France and Lombardie it is called *Dora*, or *Dorella*. *Phaseolus* in Latine, in Greeke *φασολία*, garden Smalax, some call it *Faciolum*, and *Dolichium*, among the Italians some call it *Fagioli*, some *Smilace*, *deglahortie*, others *Faginolo* *Turches*, others *Lasanio*, the Spaniards call it *Frisoles*, the Frenchmen *Fasoles*, and *Fals*, *Pinccos*, the Dutch men *Facken*, or wilde bonen. And in England it is called the hybrie beane, and being young and tender it is an excellent sallet, and is eaten altogether cob and all. It is a kinde of pulse, whereof there are white, redde, and yellow, and some speckled with blacke spots, the leaves are like Fie leaves, but something tenderer, the stalke is slender, winding with claspes about

about such plants as are next him, runneth up so high, as you may make Arbours under him: the coddies are longer then Fenigracke, the Graines within diverse coloured, and fashioned like Kidneyes: it prospereth in a fat & a veyrely bearing ground, in Gardens, or where you will: and because it climeth aloft, there must be set by them poles or staves; from the running to the tops, it climbeth upon trees, serbing well for the shadowing of Arbours and Sommer houses. It is sowne of diuers from the Ides of October to the Kalendes of November in some places, and with us in March; it groweth in Summer, the meate of them is but indifferent, the iuyce not very good, the cods and the graines are eaten together, or like Sperage. The Iewes sell them at Rome, preserved, to be eaten calue. Lens and Lenticula, in Graeke *πικρία* and *πικρά*, in Italian Lenti Lyntles, in bon mazaistre, in Spanissh Lenteza, in French Lentilla, in Dutch Linsen, is a Pulse very thicke and bushie, with leaves like the Tare, with three or foure very small graines in ebery seed; of all Pulses the least, they are soft and flat. The white ones for their pleasantnes are the best, and such as are aptest to seth and consume much water in their boyling.

It is sowne with us in Germanie, in March and in Aprill, the Pulse encreasing in mellow ground, being rich, and dry: yet Plinie would rather haue the ground leane then rich, and the season drie: it groweth in July, at which time by ouermuch rankenesse and moisture, it soone corrupteth. Therefore to cause it quickly to spring and well to prosper, it must be mingled with dry dung before it be sowne, and when it hath been so mingled soure or thus dayes, it must be cast into the ground. It groweth high (as they say) when it is wet in warme water and saltpeter, before it be sowne, and will neuer corrupt being sprinkled with Bengwing and Wineger. Varro willeth, that you sow it from the five and twentis day of the Aprill to the thirtieth, so shall it be safe from Spittles. Columella affirmeth, that if it be mingled with ashes, it will be safe from all annoyance. Cicer in Latine, in Graeke *πικρία*, in Italian Ceci, Ciceri Rosso, and Ciceri bianco, in Spanissh Garuangos, in French Chiche, & in Dutch Cicererbs, is a bushie kind of Pulse, <sup>sitcha.</sup> <sup>sitcha.</sup> habing a round Cob, and therein a couple of three corners seeds,



whereof there are that make thae kindes, white, red, and black, differing onely in the colour of their flowre: the best kinde hath a stickie Ralhe, crouked, little leaues indented, a white, a purple, or a blacke flowre. And whereas other pulse haue their Cods long and broad, according to their seede, this beareth them round: it delighteth in a black & a rich mould, it is a great spoiler of land, and therefore not good for new broken up ground: it may be sowne at any time in sparch, in rainie weather, and in very rich ground: the seed must be sowed in water a day before it be sowne, to the end it may spring the sooner: it flowreth in June and July, and then falleth to seede: it flowreth a very long while; and is gathered the fourth day, being ripe in a very short time: when it is in flowre, of all other pulse it receiueth harme by rain: when it is ripe it must be gathered out of hand, for it scattereth very soone, and lyeth hid when it is fallen. In the Chich there neuer breedeth any worme, contrary to all Pulse else: and because it drieth away Caterpillars, it is counted good to be set in gardens. Cicercule. In Latine, in Graeke *Kuduphe*, in Italian Cicorse, in Spanish Cizerche, it differeth from the Chich, only in that it is some what blacker, whiche Plinie accounteth to haue swollen corners, as pease hath: and in many places about us, they use them in stead of Pease, esteeming them farre above peason: for they both yeld more flowre then pease, and is lighter of digestion, and not so subiect to wormes. Columella counts it rather in the number of fodder for Cattell, then of pulse for man, in which number are those that follow. And first, Vicia in Latine, in Graeke *Simar*, in Dutch Wycken, in French Vesce, so called, as Varro thinks, of winding; because it hath tendrels or clapes, as the Vine hath, whereby it climeth up on such stalks as grow next it: it groweth halfe a yard high, leaved like Trefle, saying that they be something narrower: the flowre like the flowre of Pease, hauing little blacke sades in cods, not altogether round, but broad like the Lintell: it requereth a dry ground, though it will grow well enough in shady places, or in any ground, with small labour, being not troublesome to the husbandman: it requereth but one plowing, and doeth for neither harrowing nor weeding, but enricheth

Cicercule.

Tares and  
fodder for  
Cartell.



enricheth the land of it selfe, specially if the ground be plowed  
when the crop is of, so that the stalkes may be turned in: for  
otherwise the rootes and stalkes remaining. do sucke out the  
goodnesse of the ground: yet Cares would haue it sowne in  
grasse ground, not watrish, and in new broken up ground, af-  
ter the dew be gone and the moisture dried up with the sunne  
and the winde. You must beware that you sowe no more, then  
you may well cover the same day, for the least dew in the world  
doth spoile it. Neither must you sow them before the June be  
twentie foure dayes old, otherwise the Draille will deuoure it:  
his time of sowing is, as Pliny writeth, at the setting of the Barre,  
called the Berward that it may serue to seed in December: the  
second sowing is in Januarie: the last in March. In Germany  
they use to sow them in March or Aprill, chiefly for fodder for  
their Cattell. To sow Cares, and as Plinie saith Beanes, in not  
broken up ground without losse, is a great peece of husbandry:  
they sowe in June, at which time they are very good to scowe  
horses: it is good to lay them up in the cow, and to keepe them to  
serue cattell withall. Cares & Dates make a good mede sowed  
together. Lupinus in Latine, in *Stoche* *Duppe* *Quapoc*, in Italian  
and French, almost as in latine, in Spanish Altramuz, in Dutch  
Roosche Boonen, is a Pulse having one onely stalk, the leafe  
tagged in fine divisions like a Barre, the flower white, the coas  
tagged and banded about, having within them fine seeds  
hard, broad, and round, the leaues thereof do fall. This Pulse  
quieteth least trouble and is of small price, and it most helpeth  
the ground of any thing that is sowne: for there can be no bet-  
ter manuring for barren vineyards and Cows fields then this,  
which either upon barren ground prospereth, or kept in the Gar-  
ner endureth a wonderful while: being soden and laid in wa-  
ter, it seedeth Dren in winter very well: and in time of dearth  
(as Columelle saith) seedeth men to alluenge their hunger: it pro-  
spereth in sandy and grabelly grounds. in the worst land that  
may be: neither loveth it to haue any labour bestowed upon it,  
nor indigeth the goodnesse of the ground. So fruitfull it is, as  
if it be cast among Baches and Rivers, yet will it come and  
prosper: it resisteth both harrowing and raking, and is not  
amazed with weeds, but killeth the weeds about it. It may  
be

Lupinus

be wanting to men: the ground withall, this serbes the turne above all other, for being sowed, and turned in with the plow, it serbeth the turne in stead of dung: it is sowed timeliest of all other, and reaped last: it is sowed before all other Pulse, a little after Harvest: cover it how tenderly you will, it careth not (an excellent good siede for an evill husband) yet desireth it the warmth of Autumne, that it may be well rooted before winter come, for otherwise the cold is hurtfull unto it. It sloweth thrise, first in May, then againe in June, and last in July: after every sowing it beareth his cob. Before it sloweth, they use to put in cattell: for whereas they will siede upon all other grasse or weeds, onely this for the bitterness thereof while it is graine, they leaue untouched. Being dried, it serbeth for sustenance both of man and beast: to cattell it is given medled with chaffe, and for bread for mans use, it is mingled with wheate flour: or barley flour: it is very good to keepe it in a smoky loft, for if it be any thing moist, it is eaten of little waimes, and thereby spoiled. The leafe keepeth a certaine course & turneth with the sunne, whereby it sheweth ever to the husbandman, even in cloudy weather, what time of the day it is. *Fenum grecum* in Latine, in French *Fenegrec*, & *Fenigrec*, in Italian *Fenigrazzo*, in Spanish *Alholuas*, in Dutch sometime by the latine name, & commonly *Rohorne*, and *Lockshorne*: cometh up with a small stalke, the leafe like a thre leaved grasse. It is sowed well in a tender barren ground, you must take heed you plow it thicke, and not very deepe, for if the siede be covered above foure fingers thicke, it will very hardly grow. Therefore the ground must be tild with small plowes, and the siede presently covered with stakes. There are two sorts of it, the one called of the common people *Siliqua* or *Cod*, which they sow for fodder in September, the other in January, or the beginning of February: when they sow it for siede, it sloweth in June and July, when also it beareth his Cob, but the siede is not ripe till August: it is dressed to be eaten after the order of *Lupins*, with vinegar, water, & salt, some put to a little oyle: it is used both for fodder, & divers other uses. Furthermore of Pulse called of *Gellius*, *Legamenta*, we have these generall rules, that they all beare coobs & have single roots every one, except the Beans, the Chick growing deepest. The stalke of the

Fenugreek

the beane and the Lupine is also single, the other are all full of branches and slender slips, and all hollow. All Pulse for the most part, are to be sowed in the spring, and require very rich ground, except the Lupine, that cares not where he lies, they are all sowed in the increase of the sowne, except Pease: if they be watered before their sowing, they prosper the better: they are sparingly to be gathered when they be ripe, for they sode ly shorter, they will endure longest, being gathered in the change of the sowne. It is much to be regarded whether you will have or sell them, for the seeds in the increase of the sowne doe waie greater: there are that preserve them in earthen vessels, strewing ashes under them, and sprinkling them with Vineger: some use ashes alone, others use to sprinkle them with Berge wine vinegar, as I have said of the lentill. Moreover, the Chacks have willed to mingle with the dung a little saltpeter when you sow them, whereby they shall the better saith & be the tenderer, and if they be not presently tender, they will so cast into the pot a little Mustard seed, which will make them straightway well. Theophrastus addes divers things beside, which were too long to tell.

R I G O. Is it needfull for every husbandman to sow all these Graine and Pulse in his ground?

C O N O. No: but as I said before, in speaking of ground and seed, you must chiefly sow such as best agree with the nature of your ground: howbeit, there are some of them that refuse no ground. There are certaine of them, as Varro saith, that are not sowed for present necessity, but for other afterturnes. And others againe that are of necessity to be sowed, as come for men & fodder for Cattell: of which must speciall care be had, that there be no want of them, without which wee cannot live: as Rye, Dates, and Buck. Lupines, and certaine Pulse else, for fodder, refuse no ground, though it be never so barren. Besides, when as the husbandman must not onely have a care of providing such as serve for the sustenance of man, but also for such as <sup>fodder for</sup> serve for the feeding of poore Cattell, without which the <sup>Cattell.</sup> ground cannot be husbanded: therefore must he sow Pulse for the use of man and beast, and fodder in more abundance for the sustenance of beasts. Amongst all sorts of fodder, that is counted for the chiefe and the best, which the people of olde time,

Medica,

time, and the Italians at this day call Medica, some call it Trefoile, the Frenchmen call it Grandtrefle, the Spaniards Alfalfa, others call it Burgundie-grasse, because it was brought in by the Burgundians, it is now also come into Germanie, and there called Welsholken. Plinie writeth, that it was brought by the Romans, out of Media into Italy, differing almost nothing from Trefoile, or thre-leaved grasse: but that it is greater, higher, and ranker, for in stalk, leafe, and flowre, it is all one: it groweth altogether bushing in leaues. In the top of the stalk it putteth forth short cobbes, withen like hornes indented about, and hauing as it were, little prickles, wherein is the seed shaped like a Pease, and growing to the Cob in bignes as the lentill, which being chewed, tasteth like Pease: every cob hath his seed, it requireth a fat ground without stones, full of turfe & rich: in many places it cometh not up, in others it springeth very thicke. Varro giveth charge, that it be not sowed in too dry a ground or tickle, but in good and well seasoned. Plinie would haue the ground be dry and very rich. Columella biddeth, that the field, where this Medica shall be sowed, should be broken up about October, and so to lie mellowing all the winter, and then to stirre it in february, and the stones cast out, to harrow it well, and after in March to order it garden-wise, casting it into beds, euery bed ten fote broad, and fiftie in length, so that they may be easily watered, and of euery side well waded: then laying on good old dung, let it lie till Aprill, and at the end of Aprill sow it in such proportion, as euery handfull of seed may occupie sixe foot in breadth, and ten in length, and couer the seed out of hand, taking them with woaden rakes, for the Sunne will soone burne them. After it is sowne, that it come up an inch in height, you must beware you touch not the ground with any yron instrument, but eyther with your fingers, or with Rakes of wood: wade it well from all other noysome things, otherwise it will grow wilde and turne to pasture. Let the first harrow be long deferred, to the end he may somewhat shed his seedes: at other times you may mow it as soone as you will, and giue it your Cattle. Such as are skilfull in husbandry, doe say, that if you mingle Dates with the seed of Medica, and sow them, they will cause them to sticke very well: it is sowed in  
 Aprill

Aprill, or later, in May, to scape the frosts, and the seed is cast in like sort as Wheat is. When it beginneth to branch, all other weeds must be weeded away, and being thus ordered, you may mow it five times a yere. It sloweth five times, or at the least five times, so it be not cut. When you haue mowed it, water it well, and as it springeth, weede it againe. And thus as I sayd, you may mow it five times a yere, and it shall thus continue ten yeres together, it enricheth the ground, all poore and feeble Cattell are soone brought up with it, it likewise healeth Cattle that are diseased, but when it first springeth, till cattle be acquainted with it, you must giue them but little at once, least the strangenesse of the food hurt them, for it maketh them to swell, and breedeth great abundance of blood. Columella writeth, that one acre of it will well finde thre Horses a yere. In some Countreies this herbe doth grow in great plentie in every Meddow, eyther of the nature of the ground, or through the disposition of the Heavens, & sometimes the reliques of that which hath bene long agoe sowne doth yearly spring of the seed that falleth, & overgrowne with Brasse or Weedes, doth change into Meddow. I see no cause but that it may grow of it selfe, but that perhaps such plants as are brought out of strange Countreies require sowing & dressing: it is best to be mowed when it beginneth to slowe, for it must not be suffered to seed, whereby the fodder shall be the better: which being well laid up, will continue in goodnesse thre yeres, to the great profit for the grazer, for as I have sayd before, there can be no better fodder devised for Cattell, wherewith they will better feede, and sooner rise. The next in goodnes to this Medica is Cytisus, wonderfully as Plinie writeth, commended of Aristomachus, and as Virgill sayth, a good fodder for sheepe, [and being drie, a delightfull food to swine: it may be mowed sundry times in the yere, to the great commoditie of the husbandman: a little wherof doth soone feede up cattle, neither is there any other grasse that yieldeth eyther moze abundance or better milke, the most soveraigne medicine for the sickness of Cattle that may be: beside, the Philosophers promise, that Wees will never faile that haue this grasse growing nere them: therefore it is necessary to haue your ground strowed with it, as the thing

Cytisus.

that best serbeth for Poultrie and Cattell: the leanes and  
 sides ate to be given to leane and drouping Pullen: some call  
 it Telliten, some Trefoile, some great Helilot, the Romans  
 call it Trifolium, great trafe: it is a plant all hairy and whi-  
 tish, as Rhannus is, having branches halfe a yarde long and  
 more, whereupon groweth leanes like unto Fenigrake or Cla-  
 der, but something lesse, having a rising cress in the midst of  
 them. This plant was first found in the Island Cychno, and  
 from thence spread throughout the Cyclads, and so to Greece,  
 whereby the stroe of Chalse came to be great: neither is there  
 any countrie at this day, where they may not have great plens-  
 ty (as Columella saith) of this shrub. In Italy it groweth about  
 the enclosures of vineyards, it shrinketh neither for heat, cold,  
 frost nor snow: it requireth good ground, if the weather be very  
 dry, it must be watered, and when it first springs well harrowed:  
 after three yeeres, you may cut it downe, and give it your Cat-  
 tell. Varro would have it sowne in well oyled ground, as the  
 seed of Colewortz should be, and after removed and set a foot  
 and a halfe asunder, or else to be set of the slips. The time of  
 sowing of Cytisus is either in Autumne, or in the spring, in  
 ground well plowed and layed out in beds: if you want the seed,  
 you may take the slips, so that you set them foure foot a sinder,  
 and a banke cast about them with earth well dunged; you  
 may also set them before September, when they will very well  
 grow and abide the cold in winter, it lasteth but three yeeres.  
 Columella hath two kindes of Cytisus, one wilde the other of  
 the garden. The wilde doth with his claspers seede very well:  
 it windeth about and kills his neighbours as the Iule doth: it  
 is found in Corne fields, specially amongst Barly, the flowze  
 thereof is like the flowze of Pease, the lease, if it be bruised,  
 smelleth like rocket and being champed in the mouth, it tasteth  
 like Chicke, or Pease. There is another kind of Fodder among  
 the plants, unknowne to the old writers, very good to feed both  
 Cattell and Poultrie. I know not whether it be knowne in  
 other Countreies beside Germanie, the common people call it  
 Spurie, or Sperie: it hath a stalke a fote in height and more,  
 bushed forth in many branches, it hath a white flowze without  
 any lease: the flowze endeth in little knops as Flax hath, con-  
 taining

taining in them a very little seede like Rape seed. They are much deceived that take it for Cytisus, when that (as Dioscorides sayth) hath leaues like Fenugreke, and this is altogether without leaues: neither is the seede any thing like, though the use be almost one. The best milke and butter in Germanie, cometh of this seed: wherefore it is esteemed almost as good as Barley, or other graine: the straw is better then any Hay: the chaffe seedeth as well as any graines: the seed seedeth Pigeons and Doultrie in winter passing well: it is sowed in sandie and-light grounds all the Sommer long, and some sow it in spring time with Dates, for the seed sake: in Autumne and Harbest time it is sowed to feede Cattell: it is profitable for Husbandmen that dwell in sandy and gravelly Countries, wherefore they should never be without good store of it, for hennes, Geese, Goates, Sheepe, Oxen, and all kinde of Cattell delight very much in it: now remaineth the sowing of Flaxe and Hempe.

RIGO. I looke for it.

CONO. These although they be not to be received in the number of Cozne nor Pulse, Fodder nor Hearbs, yet is there great account to be made of them with the husbandmans things, without which no house can be furnished, nor man well apparelled; which being beaten to a softnes, serbeth for webs of linnen, and twisting of Cordes; and more, of this so little a seed doth spring that, which (as Plinie saith) carrieth the whole world hither and thither, that bringeth Egypt to Italy, and carrieth us from Calisto Ostia in 7. daies. Linum in Latine: in Greeke, λινον, in Italian and Spanish, Lino: in French Dulin: in Dutch almost like, saying that they call the seed Lin. And the plant Flaxe, is a very common hearbe, wherewith the women are set a Flaxing worke: it hath a slender stalk, not much unlike to Sperry, but that it groweth higher a little, and bigger, with narrow leaues, & long blew stozes in the top, which falling away, leaveth behind them little round knops as big as a pease, wherein are inclosed yellow seeds: it delighteth in rich ground, & somewhat moist: some sow it in barren ground, after once plowing, it is sowne in the spring, and gathered in summer. In Gelderland and Gulicke, where there is great store of it, they sow it about the beginning



ning of May: there are againe that obserbe thre seasons for sowing of it, as the weather shall fall out, for it requirerh raine and moisture: the ripenesse of it is perceived by the waxing yellow, & swelling of the knops that hold the seede, being then plucked up, and made in little bundles, it is dyed in the Sunne, the rootes standing upward, that the seede may fall out. Some use againe to card off the knops with an yron combe called a Riplecombe, and drying them in the sunne to gather the seed. The bundles afterwards are laid in water heated with the sunne, with some waight upon them to keepe them downe, the rinde waxing loose, sheweth when they have bene soaked enough. When the bundles unloosed and dyed in the sunne, are first baked upon wooden Bakes, then heckeled upon the hecklecombs, till that which is most fine be separated from that which is most coarse: the more wrong it suffereth, the better doth it prove: the tow is severed from the flaxe, and appointed for his use, so are they severally spun upon the distaffe, made up in bottomes, and sent to the weavers, whereof are twoven webs, to the great commoditie of all men. Last of all, the web is laid out in the hot Sunne, and sprinkled with water, whereby it is brought to a passing whitenesse. It may be remembred, that not long since the women of Germanie knew no coarser attyre. The best flaxe that is at this day, is brought from Muscovia, Livonia, and those Countries, far excellling ours in height and goodnesse. Hempe, in latine is Cannabis, in Greeke *κάρραβις ήμαρος*, in Italian, Canabe, in Spanish Cannamo, in French Chamura, and in Dutch Haveph; is a plant of the Rindish kinde, having a very strong savoy: it groweth with a single stalke, and many times to such a height, that it matcheth with indifferent trees: it is of great necessitie for the use of man, and serveth both for making of Canvas, and framing of ropes: the stalke hath many knots, out of which proceedeth branches with narrow leaves indented and sharpe. Dioscorides describeth both the wilde Hempe, and the garden Hempe, to have leaves like the Ashe, hollow stalkes, a stinking savour, and round seed. There are two kinds of it, the Male, that is without flower, and beareth a seede of sundry colours: and the female, that, to recompence her barrennesse, doth yeld a white flower. It is  
solved

Hempe.

sowed in Gardens, Orchards, or other good ground, (as Plinie would have it) after a South-west winde, with us it is sowne in the end of Aprill, for it cannot away with cold: some sow it at the rising of the Star, called the Berward, which is at the end of February, or the beginning of March: it loveth rich ground, well dunged and watered, and deepe plowed: it is naughtie sowing of it in raynie weather, the thicker you sow it, the tenderer it will be, and therefore many times it is sowne thise, though some there be that appoint to every foot square five seeds. The female, or sirble Hempe is first pulled up, afterwards the Male, or the carle, when his seede is ripe, is plucked up, and made up in bundles, layd in the Sunne for three or foure dayes, and after is cast into the water, with weight laide upon him for eight or ten dayes, till he be sufficiently watered, and as flaxe, till the rinde waxe loose: then taken out, it is dyed with the Sunne, and after broken in the brake, and then combed and hacked so: Yarne and Yopes. Of Hempe, are made Cables, Cordes, Nets, and Sailes for Shippes, garments for Labourers, Shirts, and Shettes: the Shales or Stalkes serve for heating of Ovens, or kindling of fires.

RIGG. In the Countrey of Culicke, and some partes of France, I remember an hearbe planted of the common people with great diligence, that serveth as they say for Diers.

CONO. You say true, that hearbe, Caesar in his Commentaries of the warres of Fraunce, called Gladium, in Greek *ῥοσμή*, in Italian Gnado, in Spanish Pastel, in French Gudum and Guesde, in Dutch Weyt: the diars doe use it, and with them it is greatly esteemed and great gaine ariseth thereof unto the people of Gelderland, Julies and Turin, and divers Countries else: the leaves as Plinie writeth, are like unto Dock leaves. Dioscorides writeth of two kinds, the wild & the Garden woade, saying, the Garden woade which Diers use, have leaves like Plantine, but something thicker, and the wilde leaves like Mintill, with yelloe flowers: with this hearbe Caesar saith, the people of England, were wont to paint their faces and bodies, to some more terrible to their enemies: it requireth like sowing and soile as Wheate doth: but it is a great soker of the ground, and much hurteth it: it would have a very rich and

Woads.

a fat ground, and well digged : for the ground were better to bee turned up with spades then with plowes for the sowing of this plant, and it must be very well warded. It is sowed in Gelderland in Aprill, and after the common peoples rule, in Easter weeke : at the first fallowing they marle the ground, after sowe it : you must be very hardesull in the wading of it. When it is growen a handfull hie & more, they suffer it not to flower, but with an instrument for the purpose, they cut it close by the rote, wash it, and carry it to the spill, and suffering it to grow againe, they cut it thre or some times, and so leave it to seede. The graine hearbe they grinde in spilles like Apple Mills; pressing it til they get out all the iuice thereof, then roule they it up with their hands in round balles, and so lay it upon barded floures to be dyped.

R I GO. You have greatly delighted me, in describing unto me the order of sowing of seedes, without which, not onely the people of the Countrey, but also the Courtier and Citizen are not able to liue: my desire is now to understand the order of harvest, the Country mans long looked-for time, and the reward of all his toyle.

Harvest.

C O N O. I will procede in the accomplishing of your request. When the corne is ripe, before it be scorched with the great heat of the sunne (which is most extreame at the rising of the lesser dog) it is to be cut downe out of hand : for delay herein is dangerous. First, because that birds, and other vermine will deuoure it : and againe, both the Grain and the Care, the toppe and the straw being brittle and over dry, will sone fall to the ground : if storme or tempest chance to arise, the greatest part thereof will to the ground, and therefore it must not be lingred, but when it doth looke yellow in ebery place, and before that the graine be thorow hard, when they come to looke reddish, you must then have it in, that it may rather ware in the barn, then in the field. Experience teacheth, that if it be cut downe in due time, the seede will grow in fulnesse as it lyeth in the barn : for the thorne increasing, the corne growes greater : at the change you must gather such seede as you would should be least faultie. Varro saith, that the best time for Harvest, is betwixt the Sunne stay, and the Dog dayes :

dayes: for the Corne they say, both tye in the blade fiftene dayes, bloweth fiftene dayes, and ripeth in fiftene dayes, Amongst graine and Pulse, the first that is to be gathered, is Rape seede. And because the seede, when the cob beginneth to waie yellow, declareth ripenesse, it must be gathered out of hand: and sith the seede will easily scatter, it must be laid ether in plaine smooth places in the field, or upon Canbasse: and if it be presently to be carried, the Waggon or Cart must be lined with shertes, least with jogging and trotting of the carriage, the seede fall tharow. You must take good hede as well herein, as in other Pulse, that you prevent the rayne, for the rayne falling, the cobs doe open. As soone as your Rape seede is off, if the ground be plowed, you may sow Rucke, or Whanle, as they call it: so that of one pace of ground in one pace, you may make two Harvestes. Next unto Rape hardest in these Countreies, followeth the harvest of Winter Barley, which is to be dispatched before the seede (the Eares being over-ryped) doe fall, for they have not huskes to containe them as Wheat hath, and the eares being brittle, will soone fall: yet some thinke it best to let the Barley lie a while in the field, whereby they thinke the Graine will waie the greater. Then followeth the Hempe harvest. But first (as I said before) the Fimble or the Female, is pulled. Rye is to be reaped in June or July, after that, Wheat. No better rule, then before the Graine be hard, when it hath changed colour. An old Proverbe (as Plinie saith) it is better to have in harvest two dayes to soone, then three daies to late. In Rye there is not such feare in scattering as in Wheat, which as soone as it is ripe, will shed with every winde. Wherefore good hede must be taken, that you linger not with Wheat after it is ripe: although Plinie affirmeth, that Wheate will have greater yald when it stands long: but surely deferring of it is dangerous, as well for the devouring of birds and vermine, as for shattering and falling of the seede through storme and weather: as the paxse was sene in the great winde that was in the peere of our redemption, 1567. Then followeth the harvest of Pease, Beanes, Eares, & Lentils, according as they are timely sowed, wherein you must take hede, as I warned you before in Rape seed, that they lie not abroad in the raine: for if they doe, they

Rape Harvest.

Harvest for Winter Barley.

Hempe harvest.

Rye and Wheat harvest.

The harvest of all other cornes and pulse.

they will open and lose their seed. But of all cometh the Harvest of the other Summer seed, as of Barley, Manner, Millet, and Dates. It is found by experience, that come to good for Dates after they be done: so it canst be m. to well and to be better, and to that end they are left in the field many times two or three weekes after they be done.

**R. 160.** What order have you in your reaping?

Divers  
sorts of  
reaping.

**C. 160.** There are divers sorts of reaping, according to the manner of every Country. Some with Siches, which differ also as the work requires. In this Country we use three sorts of come Siches, so: either we have a Siche like a Pickle, which holden in the right hand they cut the straw close by the ground, and have in the left hand a long Sike, wherewith they pull together that they have cut, and lay it in heapes: and in this sort we heat and tie, and such Grains as hath the thickest straw is reaped. In other places as in Iuba, where the ground being too rich, the Come groweth higher and ranker, there they hold their left hand full of Come, and with the right hand with a Pickle they cut it, leaving the straw under their hands long to help the ground withall. In other places they use a greater Siche with a long Sike, and fenced with a crooked frame of Ricks, wherewith with both their hands they cut down the Come, and with that they mow the higher sorts of Come. Varro and Columella, and other doe tell of sundry other sorts of reaping. Palladius teacheth, besides the labour of men, a shorter way to be done with an Oxe, that shall in short time cut downe all that groweth, which was wont to be used in Fraunce. The devise was, a low binde of Cart with a couple of wheeles, and the front steeles with sharpe sickles, which forced by the beast through the Come, did cut downe all before it. This trick might be used in leuell and champion Countries: but with us it would make but ill-saved work. In reaping, you must regard to goe with the winde: for if you worke against the winde, it will be dustfull, as Xenophon saith, both to your eyes and your hand. If the straw be but short, you must goe neater the ground, if it be long, you may put your Sickles to the middle to dispatch it the sooner, and to make it threth the better: and the stubble upon the ground must either

either according to Virgils rule be burnt, as not upon the ground,  
so; the bettering of the land. Some preferre that which is  
longest, to thatch Barns, Stables, and Country Cottages  
withall. And where Hay is scant, it serveth so; foraying of  
Cattell: for Barley Straw is a food that Bullockes love well,  
and beside, all kind of straw is good to litter withall. When  
the Corne is bolone, it is presently to be bound in sheaves: al-  
though Barley, Dates, and other Corne and Pulse is made up  
in Cops and Rickes, but not without hurt and hazard. The  
Corne being cut, is not to be had into the Barns presently,  
but to be let dry, according to the nature of every Soyle and  
Poult: for if it be carried in before it be thoroughly dry, it can-  
not be stored. Dates and Barley, are longest left abroad;  
as also Venticles, Pease and Pulse, because they are longest  
in drying. Wheat may soonest be carried, if it be not ming-  
led with too many weeds, that hinder the drying of it. When  
harvest is in, the ground must not of hand be plowed, but to  
kill the weeds, and to make the matter for the next sowing. Plowing  
after Harvest.  
The Corne cut bolone and dill, is to be laid either in Barns,  
Hobels, or stacks: and after in Winter, to be trode out with  
Beasts, or threshed out with Flails, and to be cleanned with  
Flannell. vest.  
R. C. G. I like you have been taught: Barns, what other ob-  
serve you in the building of them.

Plowing  
after Har-  
vest.

CONO. You must so set your frame, that the Carre may The Barn.  
be well brought into it, and so it be very close and very side, leav-  
ing open a space say two yards, a foot more and a backe range,  
but so, as neither of them open to the West, North nor South  
and East, and at both sides of the side be contrary to the wind  
for all fables and more, so that they may easily come in very  
one at your pleasure. And though the Carre be layd upon  
hulks in the stowen, yet let a space be left in the wind, that  
may be open to the very top, that you may fetch what sea you  
list to be thereby. In some places they have a Bully in the  
middle, together with they stick up the Carre to the very rafters  
of the house. In Wall and they have in the side of the Carre, but all  
holes and holes, and holes, and holes hanging round upon poles,  
that with pinnas and winches, they may be brought in, as let it  
be as they list.

### The Barne.

**RICO.**

R I G O. Those kinde of Barres they say, are not so subject to spile and Rats, nor so chargeable as the other.

C O N O. Howsoever the Barre be, you must place it as high as you may, least the Cozne bee spoiled with moisture or damps: some thinke it better so; them to be thatched then tyled, the largenesse must be according to the greatnesse of your occupying. Some, to the end Cats and Miceles may the better come by, they doe vault the floze with briches, and laying casters thereon, doe lay on their Cozne. The floze must be layze and smooth made, so as the Cozne may be well threshed or trodden out. Columella would have the floze faire paved with flint or stone, whereby the Cozne will the sooner be threshed, and the floze not hurt with beating and trampling of Oxen, and when it is san'd or winnowed, it will not be full of gravell and durt, as the earthen flozes yeld. But we content our selves with our earthen flozes well made, and of good earth, mixed with a little Chaffe, and the grounds of Oyle: for this ppe. serveth the Cozne from spile and Smets. You must make it very even and leuell, and after it is mingled with Chaffe, let it be well trodden, & so suffer to dry. You must keepe also from it Beasts, and Poultrye, which with trampling and scraping will make it rugged and uneven. When the floze is dry, the Cozne laid on it, is beaten out with flayles, and cleaved with fans, though in some place they rather like to tread it out with Oxen, and to winnow it after the old fashion, with the winde.

R I G O. Tell me, when you have thus threshed your cozne, what times have you to hope it from weibes?

Garner.

C O N O. The Garnerer Cozne is often wherein your Cozne thus threshed and cleaved shall be layd, must stand high, that they may be blowne through with the Easterne and Northerne winds, to which no moisture from the places adjoyning must be suffered to come: for the quarters of the heaven that are coldest & dryest, doe both preserve Cozne the longest. In Spaine and Apollis, being hot Countreies, the wind is not only let in on the sides, by Windows, but also at the bottom by grates. Some againe preferre it in vaults under the ground, where the dry earth doth cherish such fruites as the sunne hath brought forth, as Wheat, in Spaine and Carthage: and in our dayes, both in the

Garner.



keepe both Wine and Graine in such vaults. In Countries that are wet and watrish, it is better to make them in Garrets, as high as may be, having good regard that it be well walled and floored. Whereover, where as Corne is subiect to Mithels and Vermine, except it be very safely laid up, it will soon be consumed: therefore you must make with Clay, mingled in stead of straw, with hayre, then overcast it within and without with white Potters Clay: last of all, keepe the rotes and leaves of wilde Cucumbers in water two dayes, and with that Water, and Lime, and Sand, make Plaster, and with therewithall the walles within: albeit Plinie counts Lime as hurtfull a thing as may be for Corne, Some mingle with Lime the Urine of Cattell, as a thing that will destroy Mithels, or the leaves of Houseleke; or Wormewood, or Hoppes: but specially if you have it, there is nothing so good to destroy all such Vermine, as the drugges and bottome of Oyle: some use in the stead thereof, the pickle of Herrings. Having in this sort ordered their seedlings, and their stores being drie, they suppose that no hurtfull worme shall annoy whatsoever Corne they lay in them. But because the Garner or Butch is the most especiall thing for the preservation of graine, you shall understand that the best Garner is made of plaster of paris mixed with tyled and other small stone to raise the walls up a good height, and to smooth them both within and without with plaster, so as no stone may be perceived, and the bottome being of the same substance to be smoothed also; if you scatter chaffe amongst the graine it is a greater preserver, others cover the graine with wormewood, and it not onely destroys weabells, but keeps away both Rattse & Mice. Some lay under their Corne, Fleewort: others thinke it an assured remedy, if they be often fanned and winnowed, and thereby cooled: but Columella thinks it untrue, and that by this meanes the Vermine shall not onely be not driven out, but they shall be dispersed throughout all the Corne, which if they otherwise be left alone, will muddle with no more then the outward parts, for a hundredth depth within, there never breeds any Mithels, and therefore he thinks it better to let that alone

that is already corrupted, and will goe no further, then with farther meddling to marre all: for it is a easie matter, whensoever you need to occupy it, to take away that is tainted, and to use the rest. But for all this, experience teacheth us, that there is not so good a remedy to destroy the weevill, as is the often sanning and winnowing in Summer. After the first two yeeres, they hold opinion, they will not meddle with Corne: but I weary you with carrying you too much about; and if it please you, we will returne home.

Of Pasture  
and Med-  
dow.

R 100. If it be for your ease so to do: otherwise there can be no greater pleasure to me, then walking abroad to heare you talke of husbandry. Are these that I see your pastures, where your fat Oxen, and your Hares and your Colts goe leaping?

C 000. They are so; I lay all my pastures severall, for every kinde of Cattell to be by himselfe: in the hithermost that you see, are my Cattell that I fat: in the next are my Horses, my Hares, and my Colts: in the next are my young brade, Paterlings, and Twopekelings. The Heddowes that you see in yonder Halley, lye all to be plowed. Here next to my house, are my Ducklings, that are brought to their Dams to sucke thysie a day, and therefore ought to be nere: howbeit, such as feede farre off, must diligently and daily be looked to, for feare of diseases.

R 100. I pray you then take the paines to describe me the ordering of Pastures and Heddowes, when as there seemeth to be a great affinitie betwixt them and Corne ground, and because they are sometimes also to be plowed, me thinketh this part remaineth to be spoken of.

C 000. With all my heart, I will satisfie your desire in as much as I am able: and indeed, since I have all this while spoken of Corne ground, it is not out of order to tell you my minde of Pasture: and although Cato in some places both give the preeminence to the Vineyard: yet other old wryters doe most of all preferre Pastures, as the ground that requireth least to doe about it: and therefore they were called, as Varro saith, Praes, because they were Praes, alway in readines, and needed neither great charge nor labour, nor are in danger of spoyle by tempests, as other kinde of ground is, except such parcels

parcels as lie nere Rivers and Flande, which are sometimes  
 overflowed: and that discommoditie is sufficiently recom-  
 penced with the fatnesse that the water leaues behinde it, which  
 enricheth the ground, and makes it the better yarely to yield  
 his graine either in Pasture or Speddow. The Pastures with  
 us doe commonly serue both for Pasture or Speddow when  
 we list, specially in such places where the ground is rich and  
 drie, which they had rather to employ to Pasture, because with  
 dunging of Cattell, it wareth alwayes the better, whereas  
 with continuall bearing of Hay, it hath growne to be moose  
 and naught: but where the ground is alwayes wet and wa-  
 trish, there it is better to let it lie for Speddow. Columella mak-  
 keth two kinds of Pasture ground, whereof one is alwayes  
 dry, the other overflowed. The good and rich ground hath no  
 neede of overflowing, the Hay being much better that groweth  
 of the selfe goodnesse of the ground, then that which is forced  
 by waters: which sometime notwithstanding is needfull, if  
 the barrennesse of the ground requirith: for in bad and  
 naughty ground, good Speddow may be made, if it lie to  
 be over-drowne: but then must the ground neither lie hol-  
 low, nor in hils, least the one of them keepe the waters upon  
 it too long, and the other presently let it forth againe.  
 Wherefore lyeth the ground best, which lieth leuellest, which  
 suffereth not the water to remaine very long, nor abideth it so  
 soone. If in such ground it chauce to stand over-long, it may  
 be avoided with water Creeame at your pleasure: for both  
 overplus, and the want of water are a like hurtfull unto  
 Speddowes. It is very handsome, where drie and barrenne  
 ground lieth so by the River, as the water may be let in by  
 trenches when you list: in fine, the occupying of Pasture  
 grounds requirer more care then treabail. First, that you  
 suffer not Buzhes, Thornes, nor great Salixes, to over-  
 grow them, but to destroy some of them, as Brambles,  
 Briars, Bulrushes, and Sedges in the end of Summer,  
 and the other that be Summer weeds, as Sowthistle,  
 and all other Weeds, in the Spring. You must take heed  
 of Swine, that spoile and turne up the ground ill-favour-  
 ly, and all other Cattell, except it be in hard and dry  
 weather,

weather, so; otherwise they gult and marre the ground with the  
 depe sinking of their feet, treading in the Grasse, and breaking  
 of the Rotes. The bad and barren grounds are to be helped  
 with dung in the Winter, specially in February, the Horse  
 encrassing, and the Stones, Sticks, and such baggage as lye  
 scattered abroad, are to be throlone out sooner, or later as the  
 ground is. There are some Meddowes that with long lying, are  
 overgrown with Moss, which the old husbands were wont  
 to remedy with casting of certaine seedes abroad, with laying  
 on of Dung, specially Pigeons dung: but nothing is so good for  
 this purpose, as often to cast Ashes upon it, so; that destroyeth  
 Moss out of hand. Notwithstanding these are but trouble  
 some remedies. The best and certaintie is to plow it: so; the  
 ground after his long rest, will beare goodly Corne.  
 But after you have plowed it, it will scarce recover his old e-  
 state againe for pasture & meddow in the 2 or foure yeres. When  
 you meane to let your ground lie againe for meddow or pasture,  
 your best is to sow it with Dates, and to harrow the ground  
 even and level, and to hurl out all the stones and such things  
 as may hurt the sowe: so; Dates is a great breeder of grasse.  
 Some doe cast Hayseeds, gathered from the Hay-lost or the  
 Stacks, over the ground before they harrow it. Others againe,  
 when their Meddowes have lien long, sow Beames upon them,  
 or Rape seeds, or Spillet, and the yeres after wheate: and the  
 third yere let them lie againe for Meddow or Pasture. You  
 must beware, that while the ground is loose and soft, you let not  
 in the water, so; the forces of the water will wash away the earth  
 from the sides of the Grasse, and will not suffer them to grow  
 together: neither must you (so; the like danger) suffer Cattel to  
 come upon it, except in the second yere Goates, or Sheepe or such  
 like, after you have mowed it, and that if the season be very dry.  
 The third yere you may put on your greater sort of Cattel  
 Galles, and if the ground be hilly and barren, you may sing the  
 highest part of it in February, as I said before, casting on it some  
 Hayseeds, so; the higher part being mowed, the raine or water  
 that comes to it, will carry downe some part of the richness to  
 the bottome, as I saye before, when I spake of the manuring of  
 earable ground. But if you will lay in new ground for Meddow,  
 and

and that you may have your choise, take such as is rich, dewy, leuell, or a little hanging, or choise such a valley, where the water can neither lye long, nor runne away too fast: neither is the ranke Grasse alwayes a signe of good ground: for what goodlier Grasse is there, sayth Plinie, then is in Germanie, and yet you shall there haue sand within a little of the upper part. Neither is it alway a watry ground where the Grasse growes high, for the very Mountaines in Sycherland yeld great and high grasse for Cattell. The pastures that lyes by the Lakes of Dumone in Austrie and Hungarie are but slender, nor about the Rhine, specially at his falling into the Sea about Holland, as likewise in Friseland and Flanders. Caesar Vopiscus. The fields of Roscius were the principall of Italy, where the Grasse would be so thicke growne, as it would hide a steele in a day: You may make good Meddowes of any ground, so it may be watered. Your Meddowes are to be purged in September and October, and to be rid of all bushes, bryambles, and great soule Woods, & al things else that annoy them: then after that it hath often bene stirred, and with many times plowing made fine, the stones cast away, and the clods in every place broken, you must dung it well with fresh dung, the Poone encreasing. Let them be kept from gulling and trampling of Cattell. The mondhills and dunging of horse and bullockes, must with your spade be cast abrood, which if they remaine, would rather be hardens of Ants and such like vermine, or else breeders of hurtfull and unprofitable weeds: your Meddowes must be laid in towards March, and kept from Cattell and made very cleane: if they be not rich, they must be mended with dung, which must be laid on, the Poone encreasing: and the newer the dung be, the better it is, and the more grasse it makes: which must be laid upon the top of the highest of the ground, that the grownes may runne to the bottome. The best hearbe for pasture or Meddow, is the Trefoile or Claver: the next is sweet Grasse: the worst as Plinie saith, is Rushes, fennell, and horse-tails.

R 160. How shall I know when the Grasse is ripe, and ready to be cut?

C O N O. The time of cutting of it, is when the Bent beginneth to savee waye stiffe, and before it wither. Cato bids not to

move your Grasse with the latest, but before the same be ripe. It is best cut downe before it wither, where by you shall have both more, and better Hay of it. Some, where they may overflow it, do water it a day before they cut it, it custeth better after a belive evening.

R I G O. Doe you cut grasse in the like sort as you do Cozne?

C O N O. Almost in the like sort, some doe u's short scithes, mowing it with one hand: but we h'ce doe use the common great scith, mowing with both our hands, as I said before, that Oates, and Barley, and such other like Cozne was mowed, which scithes we use so sharpe with whetstones, as instruments of wood dyed with sand. The Grasse being cut, you are to consider of what nature the grasse is, whether very comfe and full of strong weedes, thicke leaves and great store of peny-grasse, or else exceeding fine and boyd of any thing which afeth much withering; If it be of the first kind, then after the mowing you shall first ted it, then raise it into little grasse Cockes as bigge as small Molehills, after turne them and make them up againe, then spread them; and after full dyping put them into windpyles, so into greater Cockes, then breake those open, and after they have received the strength of the Sunne, then put three or foure Cockes into one, and lastly leade them into the Barne; if it be of the latter kind, then you shall onely after the mowing, first ted it, then turne it, after put it into windpyles and cooke it into great Cockes, where after it hath stowte twelue or foure and twentie howers, you may with safteie carry it into the Barne; so any other grasse which is a meane betwixt these two, it must be well tedded and turned in the Summer, and not soke till it be dry: and if it chance to be wet with raine, it must not be turned, till the upper part be dryed. There is a measure to be used in making of it, that it be not had in too dyle, nor too greene. The one sort, if the haye be dyled up, serbeth onely for litter: the other (too greene and moyst) if it be carried into the Barn, rotteth, and the vapour being over-heated, falleth on fire and burneth. And if so be the raine chance to fall upon the grasse that is new cut downe, if it be not dried, it takes not so much harme; but if it be once turned, you must still be drying of it, otherwise it will rot.

The ma-  
king of  
Hay.

not. Therefore the uppermost part before it be turned, must be well dried with the Sunne and the winde: when it is dried, we lay it in windrowes, and then make it up in Cocks, after that in Haycocks, which must be sharpe and picked in the top, the better to defend it from the raine, which if it doe not fall, yet is it good so to doe, that they may sweat in the said Haycocks, and digest whatsoeuer moisture is in it. And therefore good husbands doe not lay it up in their lostes till such time as it hath sweat in the field. Grass is commonly mowed twice a yeare, in May or June, and againe after Harvest: the first mowing is counted the best. As soone as the Hay is off after the first mowing, it would be overslored (if you may conveniently) to the end the after swath may be mowed in Autumne, which they call in Latine Cordum. In the Dutchy of Spoletto, it is said they mowe foure times a yeare, being dry ground, and diuers other places thise a yeare.

R I G O. If a man would buy a farre or a Spanno, in what sort shall he best doe it? for I doubt not but you haue good skill in such matters.

C O N O. Ischomachus in Xenophon, telleth that his father taught him that he should neuer buy a peece of ground, that had bene skilfully or curiously husbanded before, but rather such ground as by the slothfulness and poverty of the Owner, hath lyeen untilld and neglected, and yet seeme to be very good ground: as it is better to buy a leane horse, so that he be not old, and that he hath the tokens of a good horse, then a fatte horse, and one that is curiously kept. A well ordered peece of land is held deere, and yeilds no great increase, and therefore is neither so pleasant, nor so profitable, as that which by good husbandry may be made better. Cato would haue two thinges to be observed in buying of land: The goodnesse of the ground, and the wholesomeesse of the aire: of which two, if either be lacking, whosoever doth buy it, he iudgeth him made, and meete to be sent to Bedlam. for none that is well in his wittes will bestow cost upon barren ground, nor hazard himselfe for a little rich ground, to be alwaies subiect to pestilentiall diseases: for where a man must deale with the Diuill, there is not onely his countenance, but his life doubtfull, and rather



his death then his gaine certaine. After these two principall notes, as Colomella saith, Cato added of like weight these three that follow to be regarded: the Way, the Water, and the Neighbour. The goodnesse of the way is a great matter, for it makes the Passenger have a delight to goe about it, and it is commodious for carriage, which bringeth great gaine, and little charges. Of the commoditie of water who doubteth without whose use no man is able to live? Of a mans neighbour, he would have a man have speciall regard. Hesiodus saith, *ἄνθρωπος κακὸς γείτονας*, an evill neighbour is a great mischief. I have knowne divers, that for the troublesomenesse of their neighbour, have forsaken good dwellings, and changed gold for copper, because they have had false knaves to their neighbours, and quarrellers, that suffering their cattel to run at large, in every mans ground, to spoile their Corne and their Vines, would also cut downe wood, and take whatsoever they find, alwayes bjabling about the bounds of their ground, that a man could never be in quiet so; them: or else have dwelt by some Catterpillar, Russian, or swashbuckler, that would leaue no kind of mischief undone. Amongst all which commonly there is not so ill a neighbour, as the new upstart, that takes upon him the name of a Gentleman, who though you use him never so well, will at one time or other give you to understand from whence he comes, and make you sing with Claudian: *aspicius nihil est humilis tum surgit in altum.*

A lewder wretch there lives not under skie,

Then Clowne that climes from base estate to hie.

As the Proverbe in England is, set a Knave on horse backe, and you shall see him shoulder a Knight: for an Ape will be an Ape, though you cloathe him in purple. Surely M. Portius would have a man shunne the neighbourhood of such, as the pestilence. I so; my part am happy in this point, that I have no neighbour that I need to feare.

But since death and other casualties take a man of them, the dwelling is not to be left, if it have other good commodities, except it be places in the Borders of sandy Countreies that be subiect to great Rackes. Some commend the dwelling that hath faire wayes about it, is here some

Riber

Miner or god Sparket, whereby a man may carrie his Per-  
 chandise with lesse charges. The old fellows would never  
 have a man place himselfe nere the high way, for pilfering of  
 such as passe, and trouble-somenesse of guests, as I said before  
 in speaking of the placing of an house. In the letting of a  
 farne, these things are to be obserued that I spake of before, The let-  
ting of a  
Farme,  
 in describing of a Bailiffe of Husbandrie and his labour: that  
 you let it to such, whose traibaile and good behaviour you may  
 be assured of, and that you regard more their good ordering of  
 the land then the rent, which is least hurtfull, and most gaine-  
 full. For whereas the ground is well husbanded, you shall  
 commonly have gaine, & never losse, except by unreasonable-  
 nesse of the weather, which the Civill Lawyer sayth should  
 not be any damage of the Tenant; or the invasion of the ene-  
 mie, where the Tenant cannot helpe it. Besides, the Lord must  
 not deale with his Tenant so straightly in every point, as by  
 law he might, for his rent dayes, bargaines of wood, quitrents, or  
 such, the rigour wherein is more troublesome, then beneficiall:  
 neither ought we to take every advantage, for law many  
 times is right plaine wrong: neither must we be too slacke on  
 the other side, for too much gentlenesse many times makes a  
 man the worse. And therefore it is good if the farmer be slacke  
 in his payments, to make him to know it: but in no wise to  
 be a raiser or enhaunser of rents, for that discomforts, & many  
 times undoeth the tenant. Moreover, you must not lightly  
 change the olde farmer, both because of his deserts, & that he is  
 better acquainted with the ground then a new. L. Volusius  
 would alwayes say, that he was in best case for his lands that  
 had alwayes his Tenants borne & bedde up in them, whereby  
 the long familiaritie should make them more lovingly to use  
 themselves: so sure it is an evill use often to change Tenants,  
 & therefore I doe like well that order, where the land is let for  
 the lives of the Tenant, his wife and his child, paying a yere-  
 ly rent, so that as long as he payes his rent & keepe the repa-  
 rations, it shall not be lawfull to deceive him: so hereby the  
 Tenant shall be provoked to order the ground with more dili-  
 gence, and to repaire the house, and to looke to it in all points  
 as to his owne, bestowing many times as much as he  
 hath upon it. This way of letting land me seemes is best,  
 where

where the ground is subiect to the Sea or the River, or other danger, that the Tenant be charged with maintenance of it. And there be sure that you rather let it to one of habilitie, then to an unthriftie man, that is not able to beare it, whereby you may lose both your land and your rent. In such place as lies nere the Lord, he may occupie it by his Bayliffe, or to halves: but where it is far off, it is better to let it out for a yerely rent upon the foresaid covenants. For if you occupie it with your servants, they will either looke ill to your cattell, or your ground, or suffer things to be stolne, or steale themselves, or make you be at more charges then needeth, and be carelesse in every thing. In letting of ground commonly it is covenanted that the Tenant shall not let nor sell without the leave of the Lord, and that he shall not breake any pasture or meadow land, and what, and how much he shall sow of every kinde of graine, how much he shall have for pasture, how much he shall let lie, and how much he shall mend. Here have you almost as much as I am able to say in husbanding of the ground.

R I G O. I thank you, you have greatly delighted me with the describing of your Pasture-ground and Carable.

The end of the first Booke.

The



## The second Booke:

Of Gardens, Orchards, and Woods:

THRASYBVLVS. MARIVS. IVLIA.



Because of the alliance betwixt  
Herbes, Trees, and Cozne, and be-  
cause their husbandry is almost one,  
it is reason that next the first booke,  
written of Carable ground and Til-  
lage, should follow the description of  
Orchards, Gardens and their fruits.  
Virgill in writing of husbandry,  
left this part unwritten of: howbe-  
it, diuers others both old and new

writers have not without some diligence written of this part,  
but yet by snatches (as it were) and not thoroughly: whose opi-  
nions Ioynd with mine owne experience, it seemeth good to me  
in this booke to declare. And since the use of Orchards and  
Gardens is great and ancient, and that Homer writeth, how  
Laertes the old man, was wont with his trauaile in his Or-  
chards, to driue from his mind the sorow he took for the ab-  
sence of his sonne. And Xenophon reporteth, that king Cyrus, as  
great a prince as he was, would plant with his owne hands,  
and set trees in his Orchards, in such order, as it seemed an  
earthly paradise. Q. Curtius writeth of Abdolominus that for  
his great vertue, of a poore gardner, came to be king of the Sido-  
nians. And surely: not unworthily is this part of husbandry este-  
med,

The use  
of Gar-  
dens of  
great anti-  
quitie.

med, seeing it both not alone giuing great pleasure, but also is greatly profitable for the maintenance of householde, and the sparing of charges, ministering to the husband daily sode, and sufficient sustenance without cost. For when (as Columella saith) in the olde time the people liued more temperately, and the poore at more libertie fed of flesh and milke, and such things as the ground and foldes yelded, but in the latter age when ryot and dainties began to come in, and the wealthier sort to extreme no sate but costely, and farre fetched, not content with meane diet, but coueting such things as were of greatest price, the poore people as not able to beare the charges, were banished from the costlier cates, and dwiden to content themselves with the basest sode. And hereof sprang at the first the planting of Orchard, & making of Gardens, wherewith the poorest creature that was, might stee his kitchin, and haue his victuals alwayes at hand, the Orchard and Garden seruing for his Shambles, with a great deale more commendable & hurtlesse diet. Herein were the olde husbands very carefull, and used alwayes to iudge, that where they found the garden out of order, the wife of the house (for unto her belonged the charge thereof) was no good huswife, for they should be forced to haue their victuals from the Shambles or the Sparket, not making so great account of Colwoyses then, as they doe now, condemning them for the charges that were about them. As for flesh, it was rather lothed then used amongst them. Only Orchards and Gardens did cheifly please them, because the fruits that they yeld, needed no fire for the dressing of them, but spared wood, being alwayes of themselves ready dressed, easie of digestion, and nothing burdensome to the stomacke: and some of them seruing also to powder or preserve withall, as good marchandises at home, as Pliny saith, not giuing men to seeke pepper as farre as Indie. Of Lucrin, I the Wyfter not regard, as the Poet saith. And therefore to make them of more worthinesse, & that for their common profite, they should not be the lesse regarded: there were diuers noble men of the house of Valerius, that tooke their surnames of Lettuse, and were not ashamed to be named Lettishmen. The old people had in great estimation the Gardens of the daughters of Adas; and of the kings Adonis

An euill  
Garden to  
ken of an  
ill huswife

Or Lettuse  
fin,

nis and Alcinoi, of whom Homer so much speaketh, as also the  
 great vaulted Gardens, eyther built by Semiramis, or by Cyrus  
 the king of Assyria. Epicure is reported to be the first that euer  
 deuised garden in Athens, before his time it was not sene, that  
 the pleasures of the Countrie were had in the Citie. Now when  
 Thrasylulus trauiailing in the affayres of his Prince, chanced to  
 come to the house of Marius, and carried by him into a Garden  
 that he had, which was very beautifull, being led about a-  
 mong the sweet smelling flowres, and under the pleasant Ar-  
 bours, What a goodly sight (quoth Thrasylulus) is here: how  
 excellently haue you garnished this paradise of yours with all  
 kinde of pleasures: Your Parlers, and your banketting houses  
 both within and without, as all bedecked with pictures of  
 beautifull flowres and Trees, that you may not onely feede  
 your eyes with the beholding of the true and lively flower, but  
 also delight your selfe with the counterfait in the midst of win-  
 ter, seeing in the one, the painted flower to contend in beautie  
 with the very flower: in the other, the wonderfull worke of  
 Nature, and in both, the passing goodnesse of God. Moreover,  
 your pleasant Arbours to walke in, whose shadowes keepe off  
 the heate of the Sunne, and if it fortune to raine, the cloysters  
 are hard by. But specially this little Riber, with most cleere  
 water, encompassing the garden, both wonderfully set it sooth,  
 and herewithall the grane and goodly quicke-set hedges, no  
 chargeable kinde of enclosures, differeth it both from Swan and  
 Beast. I speake nothing of the well ordered quarters, where-  
 as the Hearbes and Trees are seuered euevery sort in their due  
 place, the Hot-hearbes by themselves, the flowers in another  
 place, the Trees and Impes in another quarter, all in iust square  
 and proportion, with Alleis and walkes among them. Among  
 these goodly sights, I pray you remember according to your pro-  
 mise (for so the time requirerh) to shew me some part of your  
 great knowledge in garden matters, sith you haue upon this  
 condition heard me heretofore grabling, or rather wearying you  
 with the declaiming of my poore skill in the tilling of the field.  
 And first, as you began with the choosing of a place (meete to  
 set your house upon,) so must I with the choise of a Plot meete  
 for a Garden. The ordering of Gardens is diuers, for some  
 are

are made by the Mannor houses, some in the Suburbs, some in the Citie, wheresoever they be, if the place will suffer, they must be made as nere to the house as may be: but so, as they be as far from the Barnes as you can, for the Chaffe or dust blowing into them, and eyther subject to the Dounge heape, whereby it may be made rich, or else in some very good ground that hath some small Ryeke running by it, or if it have none such, some Well or Conduit, whereby it may be watered. An excellent plot for the purpose is, that which declineth a little, and hath certaine gutters of water running through diuers parts thereof: for gardens must alwaies be to be easily watered, if not with some running streame, some pompe to be made, or kettle, Mill, or such like, as may serue the turne of a naturall streame. Columella would haue you make your search for water, when the Sunne is in the latter part of Virgo, which is in September, before his entrance into the winter Equinoctiall, so; then may you best understand the strength or goodnesse of the Springs, when after the great burning heate of the Sommer, the ground hath a long while continued without raine. If you cannot thus haue water, you must make some standing pond at the lower part of the ground, that may receiue and containe such water as falls from above, wherewith yee may water your garden in the extreame heat of Sommer: but where neither the nature of the soyle, nor conueyance by Conduit or Pompe, or running streame is to be had, you haue no other helpe but the raine water in winter, which if you also haue not, then must you delve and lay your Garden three or foure foote deepe: which being so ordered, will well be able to abide whatsoever drought doe happen. This is also to be regarded, that in gardens that are destitute of water, you so order them into severall parts, that what part you will occupie in winter, may lie towards the South, and that which shall serue you for Sommer, may lie towards the North. In a Garden, as in the choyse of Cozne ground, you must looke whether the goodnesse of the ground be not hindered by the unskillfullnesse of him that hath occupied it. You must also make choyse of your waters, of which the best (as Plinie saith) are the coldest, and such as be sweet to drinke: the worst that comes from Ponds, or is brought in by trenches, because

The time  
of search-  
ing for wa-  
ter.



because they bzing with them the seedes of grasse and weeds: but the ground doth most delight in raine water, which killeth wormes and baggage that breeds in it: but for some herbes, salt water is needefull, as the Raddish, Bate, Kew, Sarell, to which all salt water they say, is a speciall helper, making them both pleasant and fruitfull: to all others, sweet water is onely to be used. And because I have begun to entreat of watering, I must give this note, that the times of watering is not in the heat of the day but early in the morning, and at night, least the water be heated with the Sunne: onely B. All you must water at noone, the seeds something will come the sooner up, if they be sprinkled at the first with hot water. You have here heard, that the first needfull thing for a Garden, is water. The next to this is enclosure, that it be well inclosed, both from un-  
 ring, I must give this note, that the times of watering is not in the heat of the day but early in the morning, and at night, least the water be heated with the Sunne: onely B. All you must water at noone, the seeds something will come the sooner up, if they be sprinkled at the first with hot water. You have here heard, that the first needfull thing for a Garden, is water. The next to this is enclosure, that it be well inclosed, both from un-

The time  
of water-  
ring of  
Gardens.

Enclosing  
of Gar-  
dens

ly folks & therbes, and likewise from beasts: lest lying in waite for your herbes and your fruits, they may both bereave you of your paines, and your pleasure: for if either they be bitten with Beasts, or too often handled with men, it hindreth them both of their growth and seeding: and therefore it is of necessity to have the Garden well inclosed. Now for inclosures, there are sundry kinds, some making earth in mould doe counterfeite Brick, wals: Others make them of lime and stones: some others of stones layd one upon another in heapes, casting a Ditch for water round about them, which kinde Palladius forbids to follow, because it will draw out moisture from the Garden, except it be in marish ground. Others make their fence with the seedes and sets of Thorne: some make them of mudde walles, covered with straw or heath. Varro maketh mention of some kindes of enclosure: the first naturall, the second wilde, the third souldierly, the fourth, of carpenters worke. The first and naturall is the quicke set hedge, being set of young thornes, which once well growen, regardeth neither fire nor other hurt. The second is the common hedge made of dead wood, well staked and thicke plashed, or railde. The third the souldiours fortifying, is a deepe ditch with a rampier: but the ditch must be so made, as it may receive all the water that comes from above, or falls into it, where in the summer must be so steepe, that it may not easily be climed. This kinde of fence is to be made, where

The making of a  
quick-set  
hedge.

where the ground lies nere the hieway, or butts upon the Ri ver, of which sort I shall have occasion to speake moze hereafter. The fourth fence made by the Carpenter or by the Mason, is commonly knowne: whereof there is soute sorts, either of Stones, of bricks, or Turfe, and earth, and little stones framed in mould. Columella following the ancientest authoers, preferreth the quickset hedge before the drad, both because it is lesse chargeable, and also endureth the longer, continuing a long time: which hedge of yong thornes, he teacheth to make in this sort. The place that you determine to enclose, must after the beginning of September, when the ground hath bene well soaked with raine, be trenched about with two furrowes, a yard distant one from the other, the depth and breadth of every one of them must be two fote, which you must suffer to lye empty all winter, providing in the meane time the seedes that you meane to sow in them, which must be the berries of sharpe thornes, briers, holly, and wilde Eglantine, which the Swedes call dog brier. The berries of these you must gather as ripe as you may and mingle them with the stowe or speale of tares, which when it is sprinkled with water, must be put upon old ropes of ships, or any other ropes, the ropes being thus handled and dried, must be laid up in some woodeed stowe. Afterward when winter is done, within fortie dayes after, about the coming of the Swallow, if there be any water in the furrowes, it must be let out: and the mellowed earth, which was cast out of the furrowes in the ende of Summer, must now be cast in againe, till you have filled them up to the midd: then must you handsomely unfold the ropes, and lay them in length through both the furrowes, and so cover them, taking hede you throw not too much earth upon them for hindring the spring, which commonly useth to appeare within thirtie dayes after, and when they be growne to be of some height, they must be made to incline to the space betwixt the two furrowes: in which space you must have a little walled hedge, to teach the springs of other furrowes to climbe by, which will be a solly stay and a comfort to them. But I have another and a more readier way of making of them, which I first practising in this Countie, divers others have followed: I also doe make a certaine Ditch,

Another  
newer and  
better way  
of making  
a quick-set  
hedge,

and

and gathering in the wood, the young springs of thornes, cutting off the tops, I set them on the banke of the Ditch, so that they stand halfe a foot out of the ground; plucking up all the weeds (specially the first Summer) that grow about them, and sucke away the iuyce that comforts the set. The rootes being thus rid, I cover all the earth about them with straw, whereby both the deim of the night is let into the rootes, and the paxe plant is defended from the burning of the Sunne. The yere after, I make a little slender raille of plants, whereunto I lay up the springs, weaving them in such sort as I will have them to grow, which I yereley make higher, according to the height that I would have a Hedge to spring. Eight, or at the uttermost nine foote, is a sufficient height, and whatsoever springs above, must be plashed of one side or the other, to make the fence the stronger. When I have thus done, I mat it thicker and thicker every yere, filling up the places where I see it thinne, with such boughs as I see grow out of order; and thus it is woven so thicke with yereley bindings, that not so much as a small bird is able to passe thorow it, nor any man to looke through it. When it is thicke enough and bigge enough, the superfluous springs must every yere be cut. This hedge can never be destroyed, except it be plucked up by the rootes: neither fearesh it the hurt of fire, but will grow the better for it. And this is my way of enclosing a Garden, as the pleasantest, most profitable, and of least charges.

There is another way of making of a quicke set hedge, which our Hedgers in the Countrey doe use, which is another thing the stronger, for setting the young hets, as you have said before, when they be growne to some greatness, they cut the thornes nere to the ground, and being halfe cut and broken a sunder, they baw it along the Hedge, & plash it. From these cuts spring up new plants, which will as they grow to the height, then cut them, and plash them againe in youth continually, till the Hedge be come to his full height. Thus may the hedge be made so strong, that neither dogge nor horse beath: is able to breake through it: but the other is a great deale more pleasant to the eye. And if I have not hets enough to set, then I make an Inye Garden of their use.

Another  
sort of  
hedging.

THRA. You have now spoken of Water and enclosure, two principall points in a Garden: It now remaineth to speake of the ground meete for a Garden, and the order of dressing it.

MARIVS. Of the sundry sorts of ground, and of the discerning of them, because you in your describing of Come ground before have sufficiently spoken, I doe not thinke it needfull for me to reapeate it. Again, it is enough to me to adde onely this, that the ground ought not to be too rich, nor too leane, but fat and mellow, which bringeth forth a small kinde of Grasse like haire: such ground requires least labour, the stiffe and the rich ground asketh greater paines about it, but both recompence it againe, with his fruitfulnessse. The stiffe, leane, and cold ground, is not to be mebled with, as Columella writeth in appointing good ground for Gardens.

What to  
be consider-  
ed in the  
choyse of  
Garden  
ground.  
Ayre.  
Winda.

And thus much of the Garden ground, which as I sayd, is watred, or may be watred, and is enclosed either with a wall, a hedge, or some other safe enclosure. After this, it is needfull it lie well to the Sunne, and warme: for in ground that is very colde, the warmth of the Sunne will not much availe it. And contrary, if it be a hot burning sand, the benefit of the Heavens can little helpe it. You must yet looke, that it lie not subject to ill windes, that are dry and scorching, & bring frosts and mists. Thus farre, if I could have my Garden lie as I would wish, but in as much as every man desires a Garden, and every man cannot have every comoditie, to him then that wants these benefits and hath only barrennesse to worke upon, let me advise him to take more paines in reducing his ground unto goodnesse, as first to breake up his earth in September and lay the mould loose cleane from weeds and stones, and so as all weathers whatsoeuer may peirce and season it, and so let it lie till after Winter, in all which space, if any weeds or evil growth appeare, blake them up by the rootes, and keepe the earth as cleane as at the first digging. In November turne up the ground againe, and trench it at least three fote deepe, and fill those trenches with good manure. Doe so twice: the scowling of ponds or wetches. Warte or any thing that is contrary to the barrennesse of the earth you labour, and as you fill the trenches with manure, so mixe with it the earth that is thowen up till both

both be incorporate together: so let the ground lye till the mid-  
dest of January, at which time trench it over againe, but  
not so deepe as before; and manure it also as before, then cast  
it into a leuell, and this shall make the barrenest earth as ca-  
pable of growth as the best, at the middle of March following,  
which is the most convenient time for any action in the Gar-  
den \*. But now to the ordering of your Garden. First, you  
must be sure that the ground which you meane to sow in the  
Spring, be well digged in the fall of the lease, about the be-  
leuds of October: and that which you garden in the fall of the  
lease, must be digged in May, that either by the colde of Win-  
ter or the heat of Summer, both the clod may be mellowed, and  
the rootes of the weeds destroyed, not much before this time  
must you dung it. And when the time of sowing is at hand, a  
few dayes before, the weeds must be got out, and the dung lay-  
ed on, and so often and diligently must it be digged, as the  
ground may be thoroughly mealed with the mould.

The order-  
ing of  
Gardens,

Wherefore the parts of the Gardens must be so ordered, as  
that which they meane to sow in the end of Summer, may be  
digged in the Spring: and the part that you will sow in the  
Spring, must be digged in the end of Summer: so shall both  
your fallowes be seasoned by the benefit of the cold and the  
Sunne. The beds are to be made narrow and long, as is set  
in length, and sixe in breadth, that they may be the easier we-  
ded: they must lie in wet and watry ground two foote high, in  
dry ground a foot is sufficient. If your beds lye so dry, as they  
will suffer no water to tarry upon them, you must make the spa-  
ces betwixt higher, that the water may be forced to lie & abyde  
when you will. Of the kindes and sorts of dunging being suffi-  
ciently entreated of by you, I will say nothing: onely, adding  
this, that the dung of Ases is the best, because it breedeth fewest  
weeds: the next is Cattles dung, and Shæpes dung, (if it have  
lien a yere. The ground as I said which we meane to sow in  
the Spring, we must after the end of Summer let lye fallow, to  
be seasoned with the frost and the cold: for as the heat of Sum-  
mer, so doth the cold of the Winter bake and season the ground.  
When winter is done, then must we begin to dung it: & about  
the fourteenth or fiftenth of January, we must dig it againe,

Beds,

Of dig-  
ging and  
dunging of  
Gardens.

nothing it in quarters and beds. First must the hedges be plucked up, and tresses of baraine ground must be layd in the Alleyes, which being well beaten with Wattle; and so trod upon, that the grasse be worne away, so that it scarce appeare; it will after spring up as fine as little haye, and yeld a pleasant sight to the eye; which will be very beautifull. When you have sowed your flowers by themselves, your Physicke hearbes by themselves; and your Pot hearbes and Wallets in another plateth the beds and the borders must be so cast, as the Widders hands may reach to the midst of them; so shall they not wade in their labour to tread upon the beddes, nor to hurt the hearbes. And this I thinke sufficient for the preparing of your ground before the sowing. Now will I speake of sowing; and what shall be sowed in every season. To speake of all sorts of hearbs and flowres, were an endlesse labour, onely of those that are most needfull, I meane to intreat. And first of hearbs, some are for the Pot, some for the sight, some for pleasure and sweet labour, and some so; Physicke. And againe, some are for Winter, some for Summer, and some betwixt both. The first time of sowing after Winter, is the moneths of March, April, and May, wherein we use to sow Collworts, Rabbitt, Rape, and after Beetes, Lettuce, sozel, Mustard-seede, Coziander, Will, and Water Cresses. The second season for sowing, is in the beginning of October, wherein they set Beetes, and sow smallage in Nigella & Arreche. The third season, which they call the Summer season, in some place the Gardners begin in January, wherein they set Cucumbers, Gourds, Spinnach, Baskill, Purslaine, and Savoy. Many things may be sowed betwixt these seasons, and yet doe very well. All Garden hearbs are commonly sowed before the tenth of June, such things as you would have seed, you may sow after this time.

Some things are sowed only two times a yere, in the Spring; & in the end of Summer. Others againe at sundry times, as Lettuce, Collworts, Rocket, Rabbitt, Cresses, Coziander, Cherwill, and Will. These are sowed about March, or about September, and Columella saith, doe come either of the seede, or of the slip: some of the roote, some of the stalk, some of the leafe, some of the Clot, some of the Head, some of both; others of the Watke, others of the Pith, some both of the seede and the slippe, as Kew, wilde

Pariterum,

Of Sow-  
ing.

Three sea-  
sons to  
sow in.



Parjerum, and Basill, this they cut off, when it comes to be a handfull high: Others grow both of the side and the roote, as Onions, Garliche, and such like. And although all things will grow of their sides, yet this they say, New will not doe: for it very seldome springs, therefore they rather set the slips. These that are set of the roote, doe commonly last longer, and branch better, putting forth young slips from his sides, as the Onion and Cith. The stalk being cut, they all doe spring againe for the most part, except such as have speciall stalkes, called by Theophrastus *τοκωλα*, that is, such as when the stalk is cut grow no more: Gaza interprets it *Secaulis*. The Rape and the Radish, their leaves being pulled away and covered with earth, doe both grow and continue till Summer. The fruits of some is in the earth, some without, and some both within and without, some lie and grow, as the Cucumber and the Gourd, and sometimes hang, though of greater weight by much then the fruits of Trees: some requires Hayes and helpes to clime by, as Hops, Lupines, and Pease: some side groweth better, the newer they be, as Leekes, Nigella Romana, Cucumbers, and Gourdes, and therefore some use to keepe their Cucumbers in milke or water, to cause them to grow the speedlier. On the other side, of old side better groweth the Bate, Garden Cresses, Penitall, great Parjerum, and Coziander. In the Bate this is onely observed, that the side commeth not all up in one yeere, but part the second yeere, and some the third: and therefore of a great deale of seed, springeth but a little. Touching seed, this is to be well sene to, that they be not too old and dry, that they be not mingled, or taken one for another: old seed in some is of such force, as it changeth the nature: for of old Colwort seed springeth the Rape, and likewise of Rape seed Colworts. Also that ye gather not your seedes too soone, nor too late. The very time, as Theophrastus writeth, is at the spring, the fall of the leafe, and the rising of the Dog: but not in all places and kindes alike. Of seeds, the soonest that spring are these, Basill, Arach, Raven, Rocket, that commeth up the third day after the sowing, Lettise the fourth day, the Cucumber and the Gourd, the fift day, Purslin, longer ere it come, Dill, the fourth day, Cresses and Mustard seede the fift day, Bates in

Offsides.

What Seed  
springs  
soone, and  
which  
slowly



98 The second Booke, entreating

The weas-  
ther for  
Sowing,

The  
Moone,

beginne the sixth day, in winter the tenth or the twelfth, & kees  
the xiv. day, sometimes the xv. Capriant later: which if it be  
new, (except it be thinned together) it groweth not at all. Peni-  
tiall and great Charterin, come up after xxx. dayes. Parsley,  
is of all other the longest before it come up, appearing the  
fortieth day after, or many times the fiftieth. You must  
also consider, that the weather in sowing is of great force:  
for the season being faire and warme, they come up the sooner.  
Some sayes kede one pære, and never after come up: some a-  
gaine continue, as Parsley, & malledge, & kees, & igella, that  
being once sowed, come up every pære. Such as continue but  
a pære, presently upon their sowing die: others spring againe af-  
ter the losse of their stalks, as Leekes, & igella, Onions, and  
Garlicke: and commonly all such as put out from the side:  
and all these require dunging and watering. In sowing beside  
some thinke, you must have regard to the spone, and to sow and  
set in the increase, and not in the wane. Some againe thinke it  
best from that the is foure dayes old, till the be eightene: some  
after the third, others from the tenth, till the twentieth: and  
best (as they all suppose) the spone being aloft, and not set:  
And the best time to begin to garden is at the end of February;  
but I will now descend to the more choper heabes, and first I  
will speake of Asparagus\*, which was wont to grow wilde, but  
now is brought into the Garden, it is called in Greeke,  
ἀσπάργος, in Italian, Spanish, and French, it is almost all  
one; the one call it Asparago, the other Asperge, the Dutch-  
men call it Sperages and Spiratus, because it comes up of it selfe:  
for the Garden Sperage they were not acquainted with. Now  
before I proceede to the planting of this or any other, let me  
give unto every desirous Gardener this one most necessary  
observation, which I would have him carry continually  
in his memory, which is, that all Pot-herbes must be  
sown thicke, and but thinly covered, as namely not above  
three fingers; that all plantes which Cabbedge, must be  
sown thicker, and deeper covered, as a full handfull at  
the least, but when you remove them, then plant them  
thins and set them well into the earthe. All Rades must  
be sown thins and depe as almost a fote, either let in-  
to

to the ground, or else scattered in the deepe furrowes digged and layd up for that purpose; in which the quantitie of your seede must onely direct you; for if you have occasion to sow but a small quantitie, then you may set them one by one at your leaseure or pleasure, but if your quantitie of seede be great, then (as before I sayd) turne up your earth into deepe furrowes, and in the bottome thereof scatter your seede in thirne rowdes, and after rake these furrowes into a smooth leuell, and thus doing you shall both save labour and gaine profit; but to retorne againe to Asparagus\*. It is planted in two sorts, eyther of the seede, or the roote: they take of the seede as much as you may take up with thre fingers, and bestowing it in little holes, every two or thre seedes halfe a fote asunder: they set them in rich ground, in february, and cover the ground with dung. The weeds that grow, must bee well plucked away. After the fortieth day they come up as it were to one roote, and tangled together: the rootes have sundry strong threds, which they call the sponge. In ground that is drye, the seedes are to be set deepe, and well tempered with dung. In wet grounds, on the other side, they are to be set shallow in the top of bowers, lest the moisture destroy them. The first yeare you must breake off the stalkes that grow: for if you plucke them up by the rootes, the whole sets will follow, which are to bee preserved for two yeeres with dunging and weeding. All the yeeres after, you must not gather them in the stalks, but pull them from the rootes, that the rootes being opened, may the better spring, which except you doe, you hurt the sopping. When that you meane to keepe for seide, you must in no wise meddle withall. After, burne up the Bishes, and in winter dung well the rowes with dung and ashes: they are planted also of the rootes which after two yeeres you must remove into a warme and well manured ground. Wherewith where you meane to set them, must stand a foot a summer, and a half man in depth, whereto you must so lay your soppinges (as being covered) they may best grow: but in the spring before they come up, you must loose the earth with a little rake, to ease them the better to spring.

and to make the rootes the greater. Cato would have you rake them, but so, as you hurt not the roots, and after to pull the plant from the root: For if you otherwise breake it, the root will die, and come to nothing. But you may so long crop it, till you see it beginne to grow to seide: in which yeere for the Winter time, you may according to Catoes minde, cover it with straw or such like, lest the cold do kill them, and in the Spring open it againe, and dung it well. Some thinke, that the first yeere is needlesse to doe any thing to the plant, but onely to waite it. From the roots, which they call the Sponges, there springeth first certaine buds with crumpled knots, very good and pleasant for Sallets: which if you suffer to grow, it straightway bussheth forth in branches like Fennell, and at length grow to be prickly: after it hath flowered, it beareth a Berry, first graine, and when it is ripe, red. If you would have Sallets of Asparagus all the yeere through: when you have gathered the berries, open the rootes that runne aloft by the ground with digging, and you shall have the rootes send forth new buds out of hand. It is thought, that if you breake to powder the horne of a Ram, and sow it, watering it well, it will come to be good Sperage. In the Spring time they make a very good Sallet, being sod in water, or fatte Broath, till they be tender: for if you seeth them too much, they will waste away. When they be sod, they dresse them with Vinegar, Oyle, Pepper and Salt, and so eate them: or as my friend William Prat, very skillfull in these matters, telleth me, they cut them in small peeces like Dice, and after they have parboyled them, buffer them with sweet Butter, a little Vinegar and Pepper.

Item,

That which the Cookes call *Rutabaga*, the Latines *Rutam*, the Italians *Rutache*, the Spaniards *Rudo*, the Frenchmen *Rude de gardin*, is planted at the end of February, or in March, prospering best in drye and warme grounds, it abhorreth both water and dung, which all other herbes most delight in: it is most delighted in asparagus, and where all other plants will spring of the seide, this they say will never doe it. The beards being clipped off, and set in the Spring, will very well grow, but if you remove the old root, it dieth: it delighteth in the shadow of the Spring time, and being whole (as they say)

it prospereth the better: it is sowed with cursing, as Cummin, & divers others, and cannot abide the presence of an unclean man. Lettuse is called in Dutch Lattich, in French Laitue, in Græke *Σπινάρ*, in Italian Lattuca, & so in Latine, in Spanissh *Letmã*. Lechugas, whereof be sides the wild, there are three kinde, one crumpled, another headed, a third rounne. At the end of February, we use to sow it, that it may be removed about April or May. In hot Countries they sow it in January, or in December, with intent to remove it in February: but you may sow it at any time of the yeare, so the ground be good, well dunged, & watered. When you remove them, the roots must be pared and rubbed over with dung, and such as be already planted, their roots must be pared & dunged: they love a good ground, moyst & well dunged, they spread the better (if you set by them the Rape) or when they begin to stalk, the stalk being tenderly cloven, you lay upon it a cloe or a Tilehard: they will be white & tender, if you sprinkle them often with sand. If two daies before they be gathered, their tops be tyed up, they will be round and Cabbedged. If the roots being removed when it is growne a hand broad in heighth, be pared and sintered with fresh Cow dung, and earth cast about it, be well watered, and when it groweth high, the top be cut, a pot-herd laid upon it, the flower also they will be: the more you restrain the stalk from shooting up, which must as I said, be kept downe with some stone or weight, that they may spread the better. If the Lettuse chaunce by reason of the badnesse of the soyle, the seide, or the season, to waxe hard, the removing of it will bring it againe to his tendernesse: it will have sun dry and divers taste, if taking a Credde of Sheepe, or Goats dung, and hollowing it cunningly with an Abole, you thrust into it the seide of Lettuse, Cresses, Basil, Rocket, Smallage, Doreely, and Raddish, and after wrapping it in dung, you put it into very good ground and water it well. The Doreely, or Smallage goeth to roote, the others grow in height, keeping still the taste of every one. Constantine affirmeth Lettuse to be a moyst and cold hearbe, a quencher of thirst, and causer of sleepe: and that being boyled, it nourisheth moyst, and abateth Lecherie, for which the Pythagorians call it Eunuchion. Galen himselfe the Prince of Physitions doth greatly

Endive.

greatly commended it, who in his youth did always use to eate it raw, and after in his elder yeeres boyled, whereby he kept his body in good temperatūre. Endive, in Latine, Intubum, or Incubus, not unlike the Lettise, some call it Garden Succorie, the Dutchmen, and Common sort, Endiviam, the Italians and the French, Cicoriam, the Spaniards, Endibia: it is sowne as other Garden hearbs in March, it loveth moisture and good earth, but you must make your beds when you sow it the flatter, lest the earth falling away, the rootes be bared: when it hath put forth leaves, you must remoue it into well dunged ground; that which is sown before the kalends of July, doth come to seed: but that which is sown after seedeth not. You must sow that which you would have to serue you in winter, in October, in warme stonie places for Wallets in winter: they use at this day when his leaves be out, to fold them up together, and tie them round in the top with some small thing, covering them with some little earthen vessell, the rootes still remaining to nourish them withall: thus doing they will grow to be white and tender: and to lose a great part of their bitteresse. It is said, that they will be white, if they be sprinkled a few daies abroad, and lying upon sand, be washed with the raine: And thus is Endive with his increase preserved all winter. Some there be, that contenting themselves with lesse charges and labour, doe onely cover them with earth, others againe with straw: this order of wintering of it, is now in every place growne to be common.

Colwoorts.

THRA. I see also in this pleasant Garden Colwoorts, that we Countrey folkes be so well acquainted with.

MARIVS. It is mine my Garden should not want that, which as you know Caco preferreth before all other hearbes, in describing the wonderfull properties and also thereof: and this place I onely appoint for such common Pot-herbs, as Colwoorts, Watters, Endive, Onions, Rapes, Radishes, Leeks, Carrots, Raddish, Garlike and Parsnips: the last three sort I place by themselves, and as the nature of every one requireth. Colwoorts is commonly called in Latine Brassica, or Caulis, in Græke *καυλι*, in French Choux, in Italian Caul, in Spanish Verza, in Dutch Kool. The old writers made divers sorts

sorts of it, as at this day there be. One sort with great and broad leaves, a big stalk and a very fruitfull. This sort is commonly knotone, which being the pleasantest in Winter, when it is bitten with the frosts, is sod with Bacon, and used in Boordage. The tender part of the top being a little boyled, is served for Sallets, dressed with oyle and salt. The second sort with the crumpled leafe, of the resemblance that it hath to Smalage, is called *Selwoels* or *Apiaris*, of the common people crumpled Coll, or wrinkled Coll. The third sort which is properly called Crambe, hath a smaller stalk and leafe, smooth, tender, and not very full of iuyce. The fourth sort is the great Cabbage, with broad leaves and a great head, called in Dutch *Rappes*, in French *Choux Caboz*, of the old writers *Tricina Brassica*, and this kinde is onely most set by. In Germanie there is one kinde of them that they call *Lumbard Collwoyt*, or *Sabor Collwoyt*, sweeter then the other; and not able to endure the Winter: and another with very broad leaves crumpled, and full of wrinkles, but a great deale blacker, which Italians call *Nigrecaules*, and the Latines *Nigra Brassica*, of the number of those that they call commonly red Coll, of the old writers *Marucina Brassica*. There are besides other sorts, taking their names of the Countrey where they grow, as *Anciana* and *Cumana*. The best time for setting and sowing of Collwoyts, is after the Ides of Aprill. In cold and raynie Countreies, the oftner it is dunged and raked, the better a great deale will the Collwoyts be: some use to sow them about the halends of March, but the chiefest of it gooth but in leafe, and when it is once cut, maketh no good stalk for the Winter after: yet may you twise remove your greatest Coll, and if you so doe, you shall have both more seide and better yield: for it so aboundeth with seide, as it is sowed with no lesse advantage then Rape seide. For the making of oyle, Collwoyts may be sown all the yeare long, but chiefly in March after it is sowed, it appeareth within ten dayes except your seides be old and dry, for old seide will grow to Rapes, as old Rape seide will to Collwoyts. Some say it prospereth best in sault ground, and therefore they use to cast upon the ground *Saltpester* or *ashes*, which also destroyeth the Caterpillar: it is removed in June, chiefly

chiefly when it hath put forth sixe leaves, and that when the weather is rainie, so that you cover the roote befoze with a little fresh dung, and wrap it in Strawe, and so set it. More diligence is to be used about the Cabbidge; it must be sown in March in the full of the Moone, that it may remaine in the ground two moones, and in May you must take them up, and set them againe two foote asunder. The ground must be well digged where you set them, and as fast as they grow, the earth must be raised up about them: so that there appeare no more than the very tops of them: so to cause them to grow faire and great, you must as oft as you remove them, banke them up with earth about them, that nothing but the leaves appeare. And thus you must often doe to all the kindes of them, the hoare frosts make them have a greater sweetnesse. The Wineyards (they say) where Colwatts grow, doe yeld the sweetest Wines, and the Coll corrupteth the Wine.

Spinage.

You see hereby Spinage, so tearmed (as you may know) of the prickly seedes, called in Latine Spinacia, and also in Italian, Spanish, French, and Dutch: it is sowne as those befoze, in March, Aprill, and so till September: if it may be well watered, it cometh up in seaven dayes after the sowing, you shall not neede to remove it. The seede must presently after the sowing be covered, and afterward well watered: it refuseth no kinde of ground, but prospereth in every place: you must often cut it, so; it continually groweth: it is to be boyled without any water, where in the boyling it doth yeld great store of succre, and contenting it selfe with his owne liqueur, it requireth none other. Afterward, being beaten and striced with the Raddle, till the clamminesse be gone: it is made up in little balles, the succre strained out, and boyled upon a Chafyn dish with Oyle or Butter, some adde thereunto Mervice, or the succre of some Grapes, to make the taste more tart. I shew you in order as you see, all my Kitchen hearbes: now followeth Sorrell, called in latine, Acetos, in Italian likewise, in Spanish, Romaza, in French, Oxella, in Dutch Surick, of the sowernesse thereof. There are sundry sorts of it: we have at this day two kinde, the garden Sorrell and the wilde, which are pleasant both in broth and Sallets, and of this hearbe, the wilde sorts are both  
sowye

Sorrell.



those in taste, and smaller in lease: it is sowed as all other  
 pot-herbs are, and it groweth of it selfe in Meddowes and  
 Gardens. Cummin and Coriander require well ordered ground:  
 they are sowed in the Spring, and must be well weeded. Cum- Cummin  
 min is called in Latine, Cuminum, and almost like in all other and  
 Languages: it is sowed best (as they thinke) with cursing and  
 execration, that it may prosper the better. Coriander is called Coriander.  
 in Latine Coriandum, and is almost by the same name in all  
 other tongues: it both best prosper when it is sowed of seede  
 that is oldest. Smallege and Parsly, called in Latine, Apium  
 Petroselinum, and Apium hortense, in Italian, Apio domestico, Smallege  
 and Petrosello, in Spanish, Peterfille, or Peterlin: it is sowed or Parsley.  
 at the Aequinoctiall, in the Spring time, the seed beaten a little,  
 and made up in round pellets: we call it Aequinoctiall when the  
 night and the dayes are of equall length over all the world: that  
 is, when the Sunne, the Captaine and Authour of the other  
 lights, the very soule of the world, doth enter into the signes of  
 Aries and Libra. It is thought to prosper the better the older  
 the seede is, and to spring the sooner: it commeth by the fiftieth  
 day, or at the soonest the fortieth day after that it is once  
 sowne: when it is once sowne, it abideth a long time, it re-  
 ioiceth in water or wet. Fenell, in Italian Fenocho, in Spanish Fenell.  
 Hinozo, in French Fenail, in Dutch Fenchel, is sowed in the  
 beginning of the Spring, in hot sunny places, stony ground, or a-  
 ny ground: being once sowne, it springs every yere. Anise, in Anises.  
 Latine Anisum, so knowne in most tongues, as Cummin and  
 Coriander: requireth a ground well ordered and dressed. Dyll, in Dyll.  
 Latine Anethum, in French, and Italian almost so, in Spanish  
 Eneldo, in Dutch Dyll, endureth and abideth all kinde of wea-  
 thers, but delights most in warme ground: if it be not well wa-  
 tred, it must be sowed thinner. Some never cover the seedes  
 when they sow them. Supposing that no Bird will meddle with  
 it: it commeth up also of it selfe as Fennell doth. Chervill, in Chervil.  
 Latine Cerofolium, in Dutch Kerbell, in Italian Gingidia, in  
 French Cerseil, desireth a good ground, moist, & well dunged:  
 it is sowed with the rest in cold places. In this same moneth they  
 also sow Beetes, though you may sow them when you will at a- Beetes.  
 ny other time of the yere as Spinage, it is a common Countrey  
 Herbe:

Peasbe: they call it in Italian *Beitola*, in Spanish *Acelg*, in Dutch *Beer*, or *Mangel*. No Garden hearbe hath greater leaves, so that with due oydng, it groweth like a young tree. It is called *Beta*, because when it seeth, it is (as *Columella* affirmeth) like the Greeke letter  $\beta$ . There be two sorts of them the white and the blacke, the oydng of them is after one sort: it is sowed as *Colworts*, *Wayrell*, and *Wardish* are, in March, April, or May. Some thinke the best time for sowing it is while the *Pomegranate* doth blowe: it may be sowed neverthelesse as *Lettuse*, *Cole*, and others others, at any time of the Summer. The seede, the older it is, the better it is to be sowne, as are the seedes of *Smallage*, *Wardsh*, *Garden Cresses*, *Wardsh*, wilde *Wardsh*, and *Coriander*, though in all other the newest be best. It cometh up in Summer the first day, in winter the tenth after the sowing: it loveth a moist, a rich, and a mellow ground: you may remove it when it hath put forth fine leaves, if your ground like well to be waied: if it be drie ground, it must be set in the end of the Summer, as I have said of *Colworts*, though it make no great matter at what other time you doe it. When you remove it, you must rub over the roote with new dung. This is proper to the *Bate*, that his seede come not all up together, but some the yere after, some the third yere: and therefore of a great deale of seede, there is at the first but a little shew; it groweth the broader and the whiter, if when it is something growne, you lay upon it *Wile Stones*, or such like, to cause it to spread, as I spake before of *Lettuse*. Garden Cresses, in Italian *Nasturio*, and *Agrato*, in Spanish *Mestuerzo*, in French *Cresses de jardin*, in Dutch *Kerls*, are sowed both in the Spring, and at the fall of the lease, it cometh up the first day after it is sowne, and drinketh away the moisture from such hearbs as grow nere him: mingled with other hearbs, he careth not what weather come, and therefore prospereth both as well in Winter as in Summer: if it be sowne with *Lettuse*; it cometh up exceedingly, it belighteth in moisture, which if it want, it will doe well enough: in watry places it groweth of it owne accord: as about *Paderbor*, a towne in *Westphalia*, it groweth in great abundance in the River, and therefore is called of some *Water Cresses*: it was

Garden  
Cresses.

was called in the old time *Sisymbrium*. The branches when they waere old, are tented together with white hapye rings. Garden Poppy, called in Latine *Papauer latium*, is thought best to grow where old stalkes have bene burnt: it is sowed in warme places, with other hot-hearbs. Mustard-seede, in *La* Mustard-seeds. *Mustarda* fine *Sinapi*, in Dutch *Seness*, in Italian *Senape*, in Spanish *Mostaza*, in French *Seneve*, there are two kindes, white and blacke: it is best to be sowed in the end of Summer, and againe in March. Where it is once sowne, it is hard to rid the ground of it againe, because the seed doth still grow as it falleth. It loveth to grow upon dung-hils, and cast bankes.

THRA. I see you have very sayze Raddishes here.

MARIVS. Nothing so faire as I have had them, for where Raddish as they delight in the Sunne, and in warme ground, my Gardeners have here set them in the shadow. The order of them is to be set in very good ground, and lying upon the Sunne: some say, it doth not greatly care for dung, so it may have chaffe strewd upon it: when it is come to some growth they must be covered with earth, for if it sloweth once above the ground, the rootes will never be good, but hard and full of pith. It is called Raddish, because it excedeth all other rootes in greynesse. Plinie writeth, that he saw at Erford in Germanie, Raddish as bigge as the body of an Infant. It is sowed close in the pore, in February or March, the Sunne being in the wane, lest it grow too much in leaves, 4 fingers distant one from the other: and againe in August, which is the best season for them. Those that you set after the tenth of June, will never seed, the like is to be observed in all other seedes: it cometh up commonly the third day after it is sowne: in hot and southerly Countries, the weather being faire, it groweth sone to stalk: and quickly seedes. The leaves as they grow, must still be trampled down and troden upon, whereby the rootes shall grow the greater: so thertwise it sloweth with leaves and giveth increase to the leafe and not to the roote: the less and the sweeter the leafe is, the milder and the sweeter is the roote: cold as some say, doth further the goodnesse of them: they say they will be very pleasant, if the seed be streped in sweat, or in the iuyce of Raisins: they waere sweet with cold as the Rape doth, and their bitterness is taken

taken away with vyne, and therefore some would have Radishes watred and nourished with salt waters: being sodden they come to be very sweet, and serue the curie of Napes: giuen fasting, they provoke vomite, they are hurtfull to the veines and to the tath. Radish eaten at first, is a good preseruatione against poison: eaten before meate, it breaketh winde, and provoke vyne: and after meate it looseth the belly: it is called in Latine Raphanus, in Italian Raphano, in Spanishe Rayano, in French Rave, in Dutch Retich.

THRA. There is another kinde of them, that the Dutch men call Merrettich, I take it to be that which the Romans called Armaracia, called commonly in Italy Ramaracia, the first letter misplaced.

MARIVS. You say well, but this is more full of bryanches, greater in leaues, thinne in body: the leaues are not unlike to the former Radish, but that they are a little sharper and longer, and the roote slenderer, and therefore there are some that denie it to be Armaracia: but here let the Iohannistons contend. Theophrastus maketh mention of sundry sorts of Radish: This kind of Radish hath a wonderfull biting taste, a great deale more then mustard seed, and fetcheth teares from the eyes of them that eate it: it is set and planted in this sort. The roote is cut in a great number of peeces, whereof every peece prospereth: so if you plucke up this kind of Radish by the roote, you may cut off a good quantitie of the roote, and dividing them into small peeces, setting the old roote againe by himselfe, and they will all grow and prosper very well.

THRA. Yea: have you gotten the Rape? Hitherto I thought he had onely belonged unto us, so we use to sow them after the Sunne hath bene at the highest, and immediately after our other Cere, so the substance both of man and beaust.

Rape.

MARIVS. You doe well, and we sow it now in May, and in watery ground sooner, and in some places in July. There are diuers sorts of them, some of them round, some grow all in length, and are most pleasant in taste, as at Singa, and in the Countrey of Bava. Some againe of the quantitie of a mans head, and of a hundred pound weight: but the smallest

fozt is the sweetest. There is another kind of Rape that they use to sow, which carrieth his seed in little Cods, and is chiefly planted in Germanie for to make Oyle, of the which you, the other day spake of, it is called in Græke <sup>γαλαρα</sup>, in French Rave, in Italian Rapo, in Spanish Nabo, in Dutch Ruben. <sup>The little Rape,</sup> There is also another wild kind cal'd Rapunculus, that groweth halfe a yarde high, full of seed, and tender topped. This they gather in the Spring time, before the Ralke be sprung up, and pulling it up by the rootes, do use it in Sallets, supposing it to be a wilde kinde of Rape. The Rabens also called in Græke <sup>ναβεν</sup>, in Latine Napus, in French Navet, in Italian Naop, in Spanish Nabicas, in Dutch Stockruben, may be counted in the number of Rapes, for Rapes in some ground change into Rabens, and in some ground, Rabens into Rapes. These also lobe to grow in a well watred, mellow, and a rich ground: though such as grow in sandie and barren ground, prove often the sweetest in eating. They use to sow them in March, and in some places before, as also in August. <sup>Parshippe,</sup> Parsnippe in Græke <sup>σαπυρα</sup>, in Latine Pastinaca, in other tongues almost as in Latine, is very pleasant to be eaten, and requireth a fat and rich ground, and deepe digged, whereby the roote may have come enough to grow in: it is sowed and set in the Spring, and in the end of Summer.

THRA. You have here also in this Garden red Carrets.

MARIVS. I have so. Yellow Carrets is called in Latine Sifer, in French Chirville, in Italian Sifero, in Spanish Chirivias, in Dutch Querlin, I thinke you know it. Plinie writeth, that Tiberius was so in love with this roote, that he caused Carrets to be yearly brought him out of Germanie, from the Castell of Gelduba standing upon the Rhine. It delighteth in cold places, and is sowed before the Kalends of March, and of some in September: but the third and the best kinde of sowing as some thinke, is in August. There is also wilde Carret, a kind of Parsnip, in Latine Daucus, in Italian Dauco, in French Carote savage, in Dutch Woortzel, there are that suppose it to be the yellow roote, that is so common in Germanie, they are to be sowed in March. It is generall to Rapes, Radishes, Parsneps, Carrots, Onions, and Leekes, that

Red & yellow Carrets

Leekes,

they be well trode upon, or kept rut, to the end the rootes may grow the greater. Of Leekes there are two sorts, the one called Capitatum, and the other Sectile, which they use alwaies to eat close by the ground. The headed, or set Leake, in Latine Capitatum, in Italian Porro capitato, in Spanish Puerro con Cabeza, in Dutch Eusich in French Porreau, the other Leake in Latine Sectile, in Dutch Schnielanch, beside the often taking & bringing, must be watered as oft as you cut it downe. The seede in holte Countries, is sowed in Iannarie or February, and in colder places, in March: to cause it to growe the fairer and the better. They use to knit up a good deale of seed together in thinn Linnen cloathes, and so to lay them in the ground: but to make them greater headed, when it hath well taken roote, they use to plucke it up by the blades, and raise it so, that as it were hanging and borne up by the earth, it is forced to fill the empty place that lies under it, the blades and the rootes cut off, they use to set the heads, underlaying them with a Tilleshard, that when as they are not able to runne downe in length, they should be driven to grow in bignesse and breadth. The Leake delighteth in good ground, and hateth watry ground: sowed in the Spring, it must be removed or set againe after Harvest, that they may be the greater. the earth must be continually loosed about it, and they must be pulsed and rayled up, as I said before: if when you remove them, you make in the heads of every one a little hole with a peece of Rade, or any thing except Iron, and thrust therein a Cucumber seede, they will grow to a wonderfull greatnesse: some use in stead of Cucumber seede, to put in Rape-seede. To have very large and great Leekes, you must allow a Cresset of Goats dung, and fill it full of Leake-seede, for the little sprout at the first restrain- ed, will runne altogether in one, and so come forth of the ground: and this as Hieronimus Cardanus writeth, hath bene often tried to be true. They shall not savor of Leekes or Onions, that have eaten Cummin after. It cometh up the tenth day after the sowing, and lasteth two yere: the first yere it contenteth it selfe onely with bearing of leaves, the next yere it riseth in a long steele hollow within, the top garnished with round knops of leaves. The Onion: in Latine Cepa, or Cepe, in Italian Cipoll.

Onions,

Cipella, in Spanish Cebolla, in French Oignon, the next neighbour to the Leek: is also of two kinds, the one kinde called Capicatum, that groweth to head, the other Fissile, that without any head onely flourisheth in blades, and is often gathered as Leeks are: and therefore onely is sown, and not set in February or March in faire weather, and in the wane of the Moone it delighteth in rich ground, well tugged and tugged, and therefore Columella would have the ground well fallowed, that it may be mellowed with the Winter frosts, and after dunged, after well digged againe, and the rootes and weedes cast out, laid out in beds and sowed: it is called Fissile, because it is parted and divided below, so: in the Winter it is left with his top naked: in the Spring time the blades are pulled off, and others come up in their places. The heads are set, and if you plucke away the Tayles and the outgrowings when you set them, they will grow to be very great. Twenty dayes before you set them, digge the ground well and lay it dry: & so shall they prosper the better. The heades are set in Autumne, and grow to seed as other plants woul if you meane to gather the seedes, when the stalk is growne, you must prop it up with little sticks, that the winds shaking of the stalks, shatter not the sides, no; break the stalk: which seede you must gather before it be all blacke, for the blacknesse is a true signe of the full ripeness: if you will not have it soe but head, pinche off the blade still close by the ground, so shall all the mindeuance goe to the roote. Among all other heards, onely the Onion is not subiect to the force of the Moone, but hath a contrary power, so: it waxeth in the wane of the Moone, and decreaseth in the increase of it: yet there are that hold opinion, that if you sow them in the wane, they will be the smaller, and sooner; and in the increase, they will be the greater, and the milder. The red Onion is more charge then the white they are best preserved in Rattish chaffs. When you dip them in hot water, and after dry them in the sunne, till they be thorough dry. They are of the common people thought to last longest, being hangen up in the smoke, for the husband is hath with the Onion. Apocrendo speaks next of Garlike, Garlick, called it Latine Allium, in Italian Aglio: in Spanish Ajo, in Dutch Knoblaich, in French Aux, it groweth with a blade

Pissile.

Onions.

Onions.



## The second Booke, entreating

like the Onion, but not hollow, the stalk round, and the flowers on the top in a round tuft where the seed lyeth. Carlicke groweth both of the head and the leaue, as the Onion & other of this kind both. It is commonly sowed in February or March, according to the disposition of the weather, as the Onion is. It would be set in the uppermost part of little narrow ridges, the Cloves being distant foure or five inches one from the other, & not very deepe. After when the Cloves haue put forth the little strings, or when their blades are come up, they must be well raked, for the oftner ye do so, the greater they wil be: but if you will haue the heads the greater, before it grow to stalk, you shall binde & weath the graine blades together, & tread them to the ground, for that continuall treading upon them wil make them the greater. In October the Cloves must be plucked asunder, & set in row upon high borders, that they may scape the danger of the winter frozmes. They say the scent of them will cease if you eate after them the taste of Beets tasted at the fire: thus saith Pliny out of Menander.

**THRA.** What hearbe is that yonder, that commeth up so big as a man may make a staffe of the stalk, the leaues large and round, the flowers in shape seeming to compare with the clove.

**Mallowes.**

**M A R I V S.** It is Polioke, or Garden Pallow, in Latine *Malva hortensis*, in Dutch Peppel, in Italian & French almost as in Latine. And it is the same that Horace taketh to be so wholesome for the body, and which of Heliodorus & Martial is so highly commendeth. And also which is more wonderfull, in it the leaues turne about with the Sunne, so that it may serue instead of a Dyall, declaring by the turning of his leaues what time of the day it is, though the Sunne do not shine, which the Philosophers thinke to be done by the turning of his stature. In Affrica, as Pliny writeth, it continueth in flower monthes to be like a young tree, and serues well for a walking staffe. It is sowed in October, or in the end of Summer, as also at other times, that by the continuing on of winter, it may be restrained of his high growth: it receiveth in rich and moist ground

and must be removed when it commeth to have foure or five leaves, it groweth best when it is young: when it comes to be greater, it dies in the removing. The use it both for the pot and for sallets, the taste is better when it is not removed: you must sow it but thinne for growing too ranke, and in the midst of them, you must lay little clods or stones, it requireth continuall raking, and maketh better the ground where it growes.

Next these I place Purslaine which is an excellent Sallet hearbe and loveth a fertill soyle, and though it may be sowne almost in any month, yet the warmest is the best, as April, May, June or September. Buck-arbes are an excellent meaneure for them or for any other Sallet hearbe, but above all they love drie dust and house sweepings; they are apt to shed their seede, whence it comes that a ground once possess of them will seldom want them, they may also be removed, and will prosper much the better.

The Latines call it *Portulacum*, with the Italians it hath the Purslaine. Same name, in Spanish *Verdolaga*, in French and Dutch *Forchelle*, it is sowed in Gardens, and well ordered both grow the better, and speedeth the farther, it hath a blacke seede growing in little greene cups.

Buglose is at this day with the Apothecaries called *Bozage*, though they differ something in the flowers, and in very seeds they are two sundry Hearbes: for some call the common Bozage, the lesser Buglose, and the greater Buglose is thought to be that which Dioscorides calleth *Cicium*, the true Buglose: the flowers of both sorts are used in Sallets and in Wine, because it maketh the heart merry, and therefore is called in Greeke *ισχυρουν*, that is to say, gladness: the leaves are also used in dressing of meates, it is sowne about March, and once sowne it will never away, there is also a wilde kinde of it.

Next are Strawberries, whose leades are an excellent pot-herbe and the fruit the most wholesome berry, this hearbe of all other would be set of the plant and not sowne; for the oft changing and removing of it causeth it to grow bigger and bigger, whence it comes that we see use to bring roots out of

the woods, which being set and planted in the garden, prosper exceedingly two or three yeeres together: and after, we eyther remove them againe, because they waxe wilde, or set the wilde in their places: and so have we them to yeld their fruit twise in a yere, in the Spring, and in the end of Summer. And although it groweth of it selfe in shadowy woods in great plenty, as if it delighted in shadow of Trees, yet being brought into the Garden, it delighteth in sunny places, and good watering, yelding a great deale more and better fruit: it creepeth upon the ground without a stalk with small fringes comming from the roote, with a white flower, and a leafe like a Treefoile, indented about. The berries, which is the fruit, are red, and taste very pleasantly: the Dutch men call them *Erdbeeren*, the Frenchmen *Fraises*. There is another fruit that groweth something higher, whose berry is also like the Strawberry, Dioscorides seemeth to call it *Rubus Idæus*, the Pyet of Ida, because it groweth in great abundance upon the Mountaine Ida. It is full of prickles, as the other brambles are, but soft and tender, full of branches and whitish leaues, it beareth redde berries, something paler than the Strawberry, and very pleasant in taste. The Dutchmen call it *Tobers*, the Frenchmen *Framboises*.

Raspes.


 Liquefise.

Next this I place *Liquefise* or *Lycias* is called of the English who (for the small quantitie they have growing) have the best of all nations: In Latine *Dulcis Radix* in Italian *Regolia*, in Spanish *Regalier*, in French *Recluse*, in Dutch *Clarick*, or *Sushole*.

It groweth very plentifull about the Spring, It is full of young Springs of the roote: as the Hoppe is, in drye light ground and sunnie. Next this I place *Small Reazins*, called in Latine *Ribes*, which we call at this day *Ribes*, and the Dutchmen *Sant Johns pearle*, because about *St. Iohns* it is gathered with red and rich berries, having a tart taste, quenching thirst, easing the raging and extreme thirst of fevers, and cooling the stomacke, which the Apothecaries in Sugar or Honey make all the yere. Its thought it was unknowne to the old writers: but now a common bath is made for enclosing of Goutt, and making of Borders and Archours: it will easily

Small Reazins

grow,

grow, but that it is something troublesome, by reason of his sharp prickles to be bent about Sommer-houses.

MARIVS. Melons (which some, because they are fashioned like Apples, call *Pomes*) are of like kinde of Cucumbers, and so are the *Peyons*, which the Frenchmen call *Pompeons*. The Cucumbers are called in Latine *Cucumer*, in Italian *Cucumero* or *Codivolo*, in French and Dutch *Cocumbre*. They change to *Pompeons*, or *Muskemillions*, from which they only differ in shape and greatness: when they are in greatness, they become *Pompeons*, and when they grow round, they are *Pelopompeons*: all these kindes are called by some writers *Melons*. The Grecians call all the sorts, as well Cucumbers as *Pelopompeons*, by the name of *Pompeons* and *Melons*, though there are some that make a difference betwixt *Pompeons* and *Melons*. neither doe the learned yet thoroughly agree upon these names, nor can it be certainly said what kinde should signify meant by *Pompeons*, and *Pelopompeons*. *Pompeons* doe creep along upon the ground with rough leaves, and yellow floure, and are pleasant to be eaten when they are ripe. The sweetest sort of them they call *Succrino*, or *Muskemillions*. The *Pelopompeons* are supposed to spring first in Campania, being fashioned like a *Culver*. This kinde hangereth not, but groweth round upon the ground, and being ripe, doo leave the stalk.

Some Cucumbers are called *Citrini*, of their yellownes when they be ripe: and also *Citruli*, or *Citreoli*, they grow all in length, and are spotted as the *Citrans* are: some be called *Marin*, and be called in Italian *Cucuffa Marin*: the seeds whereof is to be sown before they be ripe: they are cut in pieces, and pottage made of them, not much unlike in fashion to the *Melon*. There is also another kind of Cucumber of a huge compass, almost as big as a bushell: the poorer and hardest folks in Italy, use to carry great peeces of them to the field with them to quench their thirst. You must set all these kindes in March, the seeds must be set thicke, two fote one from another, in watris ground well drenched and digged, especially sandy ground: you must lay them in Milke, or water and Honey, three dayes: and after drye them and sow them, so shall you have them very pleasant. They will

Gourd.

have a very sweet savour, if their seedes be kept many dayes among Roseleaves. Your Cucumbers shall be long & tender, if you set under them water in a broad vessel, two handfulls under them. They delight in water so much as if they be cut off, they will yet bend toward it, & if they hang o; have any stay, they will grow crooked; as also if you set oyle by them, which they greatly abhorre. The flowers being suffered to grow in pipes, do grow a wonderfull length. They love not the Winter no more then both the Gourd, wherunto they are almost like in nature: for the flowers, the leaves, and the claspers, are like of them both: but the Gourd is more buis in climbing, so that with hasty groweth, it spreadeth quickly over the hearbes and summer-houses, running up by the walls, and mounting up to the very Tiles of the houses, having a great scint of a monstrous bignesse: hanging by a small stalk, in fashion like a Pearre, and greene in colour, although when it hath flowered, it will grow in what fashion you wilt have it: they say, there hath bene some of them nine foote in length. The round ones also grow to be used for great vessels: the rinde of the new ones, is soft and tender, but of the old ones hard, wherof when the meate is out, travellers make great bottles to carry drinke in. The Gourds that are used to be eaten in summer, are sundry in shape, some are round, some long, some broad: and though the fashion be divers, yet the nature is all one: for it is made by Art to grow in what shape you will, as in the forme of a creeping Dragon, as what you list: they are called in Italian Zuma, in Spanish Calabaz, in Dutch Kurbisch, in French Vne courge. The seedes that the Gourd beareth next to the stalk (as Palladius saith) are longest, they in the middlest round, and those that lie on the side, short, broad, and flat: if you set the sharpe end of the seede downward, as Columella saith, you shall have them both greater Gourds and Cucumbers. It delighteth in a moist, rich, well dunged, & well watered ground. That which groweth without water, brings the pleasanter fruit: and that which hath water enough, makes the lesse looking too. The flowers where they be set, must be digged a foote & a halfe deepe, the third part wherof must be filled with straw, and then with good rich mould: it must be filled to the middlest,

middle; then the sides being set, must be watered, till they be sprung, and after, earth laid to them till as they grow, till the guttles be filled. They must be set thine, thus set a sundry, it continueth up in the by reason raised after the setting. It hole that are set in hie ground, must be twie well watered, therefore they use to set by them earthen pots full of water, with rannes or clouds in them to water them. When they be a little growen, they must have helpe set by them to climb upon, the longer they be, the better the ranns be. You must beware there come no winter winds where you set them, for their pience hath greatly hurt them. Those that you hope for late, you must suffer so continue upon the stakes till winter, and then gather them, and save them, without in the house, as in the smoke, for otherwise the sides will rot away. When they long be perfected, and continue fresh, if after they be gathered, they be put into a close vessel with the likes of white wine, or hanged in a brasse of vinegar, so that they touch not the vinegar.

Next thus I place the Artichock, by Artichock. It is a kinde of Chistell, by the diligence of the Gardener, brought to be a good Garden Yearbe, and in great estimation at Noblemens tables; it is as you see, framed with a round prickly head, having a great sort of flukes set in a row. The Latines call it Scobolum, because the fruit of it something resembles the Pineapple. The Frenchmen call it Alcocolum of the Arabickes article Al, and Coclos a Pineapple, whereof it is corruptly called Artichock, in Italian and Spanish Cardo, in Dutch, sometimes by the French name, sometimes Scobion. It is called of Columella Cinara, because in his growing, he chiefly delighteth in Albes. The seed is best sown in March, and the sets in November: if you will have it yield fruit in the Spring, you must bestow much Albes upon it; it will hardly beare the first frost that it is sown. Beware that you set not the sides with the long end upward, for so shall your Artichock prove very little and evill favoured: It loveth good ground and well dunged, and prospereth best in fat ground. Palladius would have you murther, to set the sides in well ordered beds, in the increase of the Moon, halfe a fute a

sunder.

 Artichock.







little huskes white and round. It groweth twice a yere, in the Spring, and in the end of Summer: it is gathered from May till September, and it is good to plucke off the Rowe often, that it may not growe so much. In the higher parts of France it groweth wilde in such plentie, that they use almost no other seiwell: it is in cold Countries in Winter set in Cellers and hot Houses, and is brought againe in the Spring into the Garden. But here you must beware, that when you first bring it out, you keep it from the speech of sunne, setting it in the shade, acquainting it by little and little with the ayre: some use to house it with Sotwin and Helle-dung, and so leave it in the Garden.

Sage.

Sage, in Latine *Salvia*, and like in other Languages, is an herbe common in every Garden: it is plucked both of the steepe, and of the flie, in March, in any kinde of ground, it maketh no matter to be: the gardeners use to lay bucking aches about it, whereby it prospereth the better. Next to Sage, is Mint.

Mint.

Mint, in Latine *Mentha*, in Dutch *Mynt*, in Italian and French, after the Latine, in Spanish *Yerva buena*. It is planted and sowed in all things on August: it prospereth both in sun and wet ground, and groweth well by waters. If you lacke seeds, you may take the seede of the white Mint, and set them with the tops in a dish of water, where they shall have their nourishment, and in a few dayes you shall have them ripe.

Pimpernel.

Pimpernel, in Latine *Physicella*, is called both in the Dutch, and in English: and being thus sown, groweth everywhere, both in sun and shade, in any ground, it prospereth in most places.

Hyssop.

Hyssop, in Latine *Hyssopus*, in Dutch *Hyssop*, and so called in most Tongues in Europe, is a sweet herbe, and is sown in every Garden: it is sown both of the flie, and of the flie: when it hath bene taken root, it may not be the thickest of mint, but it is a good herbe, and is used in many places.

Savorie.

Savorie, in Latine *Savaria*, in Dutch *Savaria*, in Italian *Savaria*, in French *Savaria*, in Spanish *Savaria*, and so called in many Tongues, is a sweet herbe, and is sown in every Garden: it is sown both of the flie, and of the flie: when it hath bene taken root, it may not be the thickest of mint, but it is a good herbe, and is used in many places.

Basil.

Basil, in Latine *Ocimum*, in French *Ala*, in Dutch *Basil*, in Spanish *Basil*, and so called in many Tongues, is a sweet herbe, and is sown in every Garden: it is sown both of the flie, and of the flie: when it hath bene taken root, it may not be the thickest of mint, but it is a good herbe, and is used in many places.

it hath: it is also good for the pot: it is sowed in March and April, and delighteth in sunny ground, you must put two seeds still together. Basil is best watered at none, whereas all other herbs are to be watered in the morning and in the evening, it may be removed in May. Theophrastus saith, that it prospereth best, when it is sowed with cures. Marjerum, in Latine Amarracum, and Maiorana, is also in like sort used: the Dutch and the Italians call it after the Latine, the Spaniards Amore-dux, the French Mariolaicne and Thyn, in Græke of Dioscorides and Paulus Aegineta *συλτροικον*: this also for the pleasant savour it hath is set in pots and in Gardens: it is sowed in March three or foure seeds together, and halfe a scote a sinder, in May when it groweth to some height as Basill, it is removed. Time, more of kindred to these, in French, Italian, and Dutch like the Latine, in Spanish Tomillo, delighteth in Rorie, light, and sunnie ground: it springeth of the seeds and of the slippe, and also of the flower, as Theophrastus saith. These three tender and delicate Herbes are to be sowed with great heed, either in earthen pots, or in Garden beds. Hitherto have I described unto you such Herbs as serve for the Kitchen: and because the later sort are also esteemed for the savours, I will goe forward with the description of the rest that are set in Gardens for the pleasure of them, and for the savour doe garnish the said Gardens, and serve also for other purposes. Of Rose-marie I spake before, I will now procede with these that grow before my sat. Lavender, called in Latine Lavandula, or Lavendula, that groweth in borders about the beds, and keepeth the Latine name in other tongues, doth grow in wilde places and Rorie: it is set of the slips, and removed: it groweth to fopike in June, and in July is gathered & tyed in bundles for the savour: it is distilled for sweet waters. Flower, gentle, in Latine Amaranthus, though it have no savour at all: yet hath it a de-lightfull beautie to the eye: the Frenchmen, for the fairnesse of the colours, excellen both Crimson and Purple in graine, doe call it Passelleurs, the Italians Fiorveluo, because it contendeth in colour with Crimson in graine: it loveth to be often gathered and plucked, wherby it springeth the better: the flowers after they be dead, with a little water come againe

again to their colour: it is called *Amaranthus*, because it dyeth not.

Lavender.  
cotten.

Myrtell.

Lavender-cotten: some call it *Santonio*, and female Southern-wood, in Dutch it is called *Cypresien*, in French *Cyprez*: it groweth commonly in Gardens, springing every yere. Myrtell, in Latine *Myrtus*, in Italian *Myrto*, in Spanish *Arabian*, in French *Meurte*, in Dutch *Welscheidelber*, the leaves are not much unlike the leaves of the Olive tree, something smaller, with slender branches and leaves growing in order one by another, as you see, with blacke berries, and leaved like the Pomegranate. It groweth alwayes greene: it is set and sowed both of the seede and slippe, and the stocke: but you must drill raise up the earth about it: till it be thoroughly rooted. Some sow the berries being a little beaten, and covered in furrowes of earth: it delighteth in continuall weeding: so groweth it to a handsome height, meets to shadowe Beards: it loveth to be watered with the Urine of men, or of sheepe. This onely is to be wondered at, that of the liquor thereof alone, may be made all sorts of Wine and Oyle: Cato teacheth to make Wine of the berries, being dyed, and put in water and honey sodden together: if they be not dyed, they come to Oyle: how the wine of them is made, *Discorides* sufficiently declareth. *Plinie* reporteth that Cato made three sorts of Myrtell, white, blacke, and a third kind, that he calleth *Conjugale*: it delighteth to grow by the Sea bankes, as *Servius* saith, it groweth at this day commonly in Italy along by the Sea coasts.

I may not in this place forget *Rose*, whose seed is so pretious and medicinable, it is hot and dry, it dissolveth humors and obstructions, and is very comfortable for weakes stomacks, it delighteth in good and loose moulds, and is to be sowne in the height of the spring onely.

Next this I place *Dynant*, which is also hot and dry, and excellent against any sickness of the Liver, the ground in which it most soothly, would be a little stonie and full of Rubbish, yet by no means undrained: the season fittest for the sowing of it is March and September, the more being in Libya or any other moist signe: it must be continually watered till it appears above the earth but after sojourne, for being once well bred it is ever certaine.

# of the order of Gardening:

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White Poppie is Colde, and moyst, and much proboloth  
sleape, it would be sowne in a rich warme ground in the mo-  
nethes of March, September and November.

Germander is hot & drye and excellent against the Kings evil,  
Obstruitions of the Spene, and hardnesse of urine. It is an  
herbe hearbe and will prosper in any ground, it is to be sowne  
either in the Spring or fall of the lease, but if you set the slippe  
it flourisheth the better, and it is most comely for the setting  
forth of knots in Gardens.

Valerian is hot and drye, and preventeth infection, it helpeth  
stitches and other griefes proceeding from windy causes, it lo-  
veth to grow in moist and low places, the ground being well  
manured, and till it be shot at least an handfull high, it must  
be kept with continuall watering; The moistest time in the  
yeere is the best to sow it in.

Pepperwort is hot and drye, yet of the two much more hot, it  
is good against all kinde of Aches and other paine in the  
joints, or sinewes; It delighteth in a rich blacke Soyle, fat and  
loose, it would be sowne in February, and removed in Septem-  
ber.

Philipendula is very hot and drie, and is good against abor-  
tive Birthes, Stone, Strangury, or any greese proceeding from  
cold causes; it may be sowne in any barren, stonie or gravelly  
soyle, in the monethes of May, Aprill or September; it  
neither desireth much weeding nor much watering, but  
being once committed to the ground appeareth sodainly.

Lastly, and which is not inferiour, but rather superiour to any  
before going, I place the blessed Thistle, which the Italians  
call Cardus Benedictus, it is hot and drye and very soveraigne a-  
gainst most inward sicknesses, especiall fevers and infections; it  
stancheth blood, and is a great comforter of the brayne, it de-  
lighteth in a rich ground and a loose well tempered mould, it  
must be sowne very shallow and not covered above two inches  
deepe; the first quarter of the moone is the best time to sow it  
in, and in the moneths of March, May or September; if you  
sow a little fine flaxen Wheat with it, most assuredly it will  
prosper much better.

T M R A. Oh what sweets and goodly Celiflowers are here! Celiflowers,  
you

You may truly say, that Salomon in all his Princely pompe, was never able to attaine to this beauty: some of them glister with a perfect Crimson dye, some with a deep Purple, and some with a passing beautiful Carnation: I marvaile the old writers knew nothing of these in their time.

MARIVS. There are some that suppose it to be a kinde of Garden Betonie, which the Gardener fetching out of the field, and thrusting Cloves into the rootes of them, with diligent planting, have brought to this excellency: others thinke it to be called Vetonica of the Spaniards, who first found it. Some thinke it to be Oenanthe, because it floweth with the Wine: it delighteth in warme sunnie ground: it is sowed seldome of seede, but commonly set of the slips, as I said of Rosemary. The Gardners in the end of Summer, doe take the rootes and set them in Pans, Pots, or Bailes, and when the frostes come, they carry them into their Cellers, and in sayre warme dayes bring them abroad againe, and suffer them to be now or then watered with the raine. It hath bene often sene, that in such vaults or cellers they have flowed all the winter long, through warmenesse of the place: some set bonches about them, and cover them with straw and horse-dung, to preserve them against the cold: it often happeneth that one roote beareth one pale white flower and red, and the other speckled or Carnation.

Thus much for the opinions of the Ancients; but because the English are at this day the onely excellent Masters of this most excellent flower, I will therefore rely onely upon their opinions; and they affirme that Gilliflowres are of divers kindes; some single as Pinks, Wall-gilliflowres, and all sorts of Gilliflowres that are sowne from the seede; some double, as the Carnation, the Stammell, the Clove-gilliflower, the Dover, the Granado, the Queenes-gilliflower, the Wandeleir, the Chrysanline, and a world of others, which are of all other flowers most sweete and delicate. All but the Wall-gilliflower love good fertile earths, and may be sowne either in March, July, or August, they are better to be planted of slips than sowne, yet both will prosper. They are very tender, and the roote so pleasant that the wormes will destroy them, and thence it comes, that they plant them in earthen pots and halfe tubbs, which at  
your

your pleasure you may remove from the sunne to the shade; and from the roughness of soyles to places of shelter: they grow up high on long slender stalkes, which you must defend and support with square crables made of splinted wood, lest the winde and the waight of the flowers breake them. The white Gilliflowres you may make of any colour you please, as if you would have them of a purple colour, then they lay the sides in steepe in the lees of red wine, and after their soying, water them with the same lees: if you will have them of a scarlet red, you shall put Alermilion betwene the rinde and the small beards growing about the roote; if you would have them blew, you shall dissolve Azure or Violett betwene the rinde and the head; if yellow, then dissolve Orpiment, if Greene, dissolve Vertu grease; and thus of other colours. Now if it please you to have them of mist colours, you may also by grafting of contrary colours one into another, attaine your desire, and you may with as great ease graft the Gilliflowre as any flower whatsoever, by loyning the knots one into another or twisting the rootes one into another, and then wrapping them about with a little soft, leaved silke of the same colour you would have the Gilliflowre, and covering the place close with a little soft red waye well tempered; and you shall understand that the grafting of Gilliflowres maketh them exceeding great, durable and most orient of colour. Now if you will have your Gilliflowers of dyvers odoriferous smells, you may doe it in this manner, take two or thre great Cloves and keepe them cleane and hysle them, and put them into a fine camphire ragge, and so bind them about the roote of the Gilliflowre nere to the setting on of the stalk; and so plant it in a fine soft and fertile mould, and water it with the rose water wherein the Cloves were steeped, and the flower which springeth from the same will have singularly a most sweet odour of the Cloves and the Rose water; that it will have both delight and wonder. If in the same manner you take a stick of Cinamon and steep it in Rose water, and then hysle it and bind it as aforesaid, all the flowers will smell strangely of Cinamon. If you take Cloves and steep them in spiced wine, and mist it with the same



dropes of Damaske rose water, and binde it as aforesaid: the flowers will smell strongly of Muske, yet not too hot or offensive by reason of the extraction of the Rose water; and in this sort you may doe with Ambergrasse, with Benjamin, with Socotor, or any other swete drugges whatsoeuer. And if in any of these confections before named, you keepe the sides of your Gilliflowres, foure and twentie houres before you sow them, they will take the same smells in which you keepe them, onely they will not be so large or double as those which are replanted or grafted.

Of the Wall-gilliflower.

Sow so: your Wallgilliflower, it delighteth in hard stony, lime and stonie ground, whence it cometh that they covet most to grow upon wallies, Pavements and such like barraine places; it may be sowne in any moeth or season, for it is a siede of that hardnesse, that it makes no difference betwixt Summer and Winter, but will flourish in both equally and beareth his flowers all the yere, whence it comes that the husbandman preferres it most in his Backgarden; so: it is wondrous sweete and affoordeth much home: It would be sowing in verie small quantitie, for after it have once taken roote, it will naturally of it selfe overspread much ground, and hardly ever after be rooted out: it is of it selfe of a exceeding strong smell and so sweet, that it cannot be forced to take any other, and therefore is ever preserved in its owne nature.

To preserve Gilliflowers.

For the preservation and increase of all other Gilliflowers (before spoken of) which are of tender and curious nature; and because the seede at no time dwelleth so long more than a single yeare, therefore it is good that you observe both in the sowing, and at the fall of the leafe, or at any other time when the flower is richest in its branches, to ripen many as conveniently you can without hurt; and plant them in a bed digged for the purpose in some shady place where the Sunne cometh as little as may be, and plant them as thick and close together as may be, for they will preserve us: And other while which you have planted in the fall of the yeare you may remove in the spring and plant them

them in your knots, Borders or any other other perfitious place, and those you planted in the spring you may remove at the fall, and if any of your elder roses dye or decay as the Sunne is wonderful perfitious unto them, then you may at any time from this Roze of young Imper supplie the place, and keepe your Garden ever flourishing.

The Heliotropion or flowers of the Sunne is in nature and colour like other English Marigolds, only it is exceeding huge in compasse, for many of them will be twentie and foure and twentie inches in compasse, according to the fertillnesse of the Soyle in which they grow, and the oft replanting of their rootes, they are exceeding goodly to looke on, and pleasant to smell; they open their flowers at the rising of the Sunne, and close them againe at the Sunne setting: it delighteth in any soyle that is fertile eyther by acte or nature, and may be sowne in any Moneth from Februarie till September.

The oft planting and replanting of the root after it is sprung a handfull from the roote, maketh it grow to the uttermost bignesse: it would have the East and West open upon it, only some small penthouse to keepe the sharpnesse of the winde from it.

THRA. Roe, ponder are Roses growing in Borders, and made in a maze: doe they grow of the sedge, or of the set?

MARIUS. Roses, called in Latine Rosa; and in all other languages as in Latine, are diversly planted, sometime of the rootes, sometime of the branches, being cut in small sets, and planted a foote asunder. Some weathe them in Garlandes, and so set them to have them smell the pleasanter. The use of sowing of them is best: howbeit, they will very well grow of the sedge, though it be long ere they spring, and therefore they set them of sets a foote in length; it neither delighteth in rich or moyst ground, but is well contented to grow amongst rubbish, and under walles. The places where they must grow must be digged deeper than Coyne ground, and not so deepe as the Vineyard: the Rose is rather a Thorne then a plant,

and groweth upon the very hyambles : it commeth first out in a little budde and long sharpe beard, which after they be opened, it outcloeth it selfe & spreadeth abroad, with a yelow beary like in the midst. Pliny maketh mention of sundry sorts of them : one sort he calleth Milcia, having an Orient and fiery colour, another Alabandica, with white leaves, and Spermonia, the basest sort of all : the Damaske and the white, are used for sweet waters : they differ in roughnes, prickles, colour and smell. There are that have but only five leaves, & others with an hundred leaves, neither good in beauty nor in smell : the roughnes of the rinde (as Pliny sayth) is a signe of the savour. There are some little pale ones, called Carnation and Provencars, these do wonderfully grow where they once are planted, and have a most excellent savour. Roses are used to be set in February, which is either done with the seed, or the set planted in little furrowes. The seedes (as Palladius sayth) are not the little pebble things in the midst of the Rose, but the graines that growes within the red riped Berry : the ripenes whereof is harmed by the swarthinnesse and the softnesse of the berry : where they once are planted, they continue long, and after they be, they send out new buds and springs. If you lacke sets, and would of a few have a great number, take the branches that begin as it were, to shew their buds, and cutting them in sundry sets, foure or five fingers in length, set them in good ground well dunged and watered : and when they be of a paces growth, take them up and set them a fote asunder, proine them and trimme them with often digging about them. Roses must still be cut, for the more you cut them, the thicker and the doubler they grow, otherwise they will ware single and wilde, it will also doe them good sometime to burne them : being removed, it springeth very soone and well, being set of sets foure fingers long and more, after the setting of the seaven starres, and after removed in a Westerly winde, & set a fote asunder, and often digged. The old Rosiers must have the earth loosed about them in February, and the dead twigges cut off, and where they ware thinn, they must be repayed with the young springes. To have Roses of fine sundry colours upon one roote, make when

Muske  
Roses.

When they begin to burgee, a fine hole beneath in the stocke under the top, and fill it with red colour made of Blaseell sod in water, and thrust it in with a cloath, and in the like sort put in to another part of the stocke graine colour, & in another yellow, and what other colours you will, and cover the holes well with Dre doung and Lome, or very good earth. If you will have your Roses beare betimes, make a little trench of two hand-bredths round about it, and powze in hot water twice a day, and thus doing, (as Democritus promiseth) you shall have Roses in January. You may preserve Roses before they open, if making a slit in a Rinde, you enclose the blossome; & when you would have fresh Roses, take them out of the Rindes; others put them in Earthen Pots close covered, and set them abroad: the Roses continue allwayes fresh that are kept in the Dregges of Oyle. If you will have them at all times, you must set them every moneth, and dung them, and so (as Didymus sayth) you shall have them continually. To cause them, or any other flowers to grow double, put two or three of the seedes in a Wheat straw, & so lay them in the ground. If you set Garlick by your Roses, they will be the sweeter: the drier the ground is where they grow, the sweeter they will be, as it appeareth by the season of the yere, for some yeres they are sweeter then others: the Rose will be white, that is smacked with Brimstone, when it beginneth to open: amongst all Roses, those are most to be commended, that they call Carnations and Provincials. The Oyle of Roses was greatly had in estimation even in Homer his time, and at this day the Vinegar of Roses is greatly used. Next unto the Rose in worthinesse, for his savour and beautifull whitenesse is the Lily. The Greeks hold opinion: that it sprang first of Iunos Urine sprinkled up on the ground. In February we begin to set Lillies, or if they grew before, to lose the earth about them with a rake, taking good heed that the young tender shotes about the roote be not hurt; nor the little head, which taken from the old roote, be set for new Lillies. As the Roses are, so are the Lillies, the sweeter, the drier the ground is where they grow: Lillies and Roses being once set, continue both very long.

There are red Lillies made so by Art, for they take the stalkes and rootes of the Lillie, and hang them in the smoake till they wither, and when the knots begin to uncover, they are layd in March in the Lees of red wine, till they be covered, and then set in the ground, with the Lees powdered about them, so will they come to be purple; and indeede as you alter the colour of the Gilliflowe, so you may change the complexion of any Lilly.

Violets.

There are sundry sorts of Violets, both of kinde and colour, but the smearing of them is in a manner all one.

Bearefoote  
or Setter-  
wort.

Next I place Bearefoote or Setterwort, and there are two kindes of it, the blacke and the white. The roote of the Bearefoote they thrust through the eare, or into the bzeall of the beast, that is either diseased in his lungs, or hath the Spurren. Columella seemeth to call it Consigillo: it groweth not in Gardens, except it be sowed, it continueth long, and loveth cold and woody ground.

Angelica.

There standes, not farre from that, another very noble hearbe in Whisicke called Angelica. His roote, because it is a soveraigne remedy against the plague, and hath divers other good operations, it is cherished in our Gardens, and being once sowed, it cometh up every yere: it groweth also wilde in the mountaine Countrey, and flowreth in July and August.

Helicam-  
pana.

There is also Helicampana, this also is set in our Gardens for medicines sake, and we make much of it for the roote, it groweth wilde in the hilly Countries, and by shadowy places. In Summer the roote is taken out of the ground, and cut in small pieces, and so dried: at this day it is called *Enula campana*: it hath a yellow flowre, a leafe like Pullin, but white and hoarie at the one side.

Worme-  
wood.

Wormewood, though it grow in every place, yet this that you see here is *Romane* or *Ponticke* Wormewood; this kinde is set in our Gardens, and thought to be the best.

Savine.

Savine which we have here also in our Gardens, for divers diseases of Cattell, hath leaves like Juniper or Cypress, alwayes greene, there are two kindes of it, one like the *Tamariske*, the other like *Cypress*: it is a bush rather spreading in breadth, then growing in height: the Berries which he beareth, may be gathered in the end of Summer, or at any other time.

Here

Here is also Valerian which is hot and drie, and preuenteth infection, it helpeth scitiches and other graces proceeding from wilde causes, it loveth to grow in moist and low places, (the ground being well manured,) and till it be shot at least an handfull high, it must be kept with continuall watering; the moistest time in the yere is the best to sow it in.

This quarter I keepe for outlandish flowers, which although they are moze for beauty and glozie then use or smell, yet are they such an ornament to the garden, and so pleasing to the eye besides the raritie and strangeness, that the Garden is held imperfect which is deprived of them, the number of them is like their colours hardly to be numbred, therefore I will trouble your eares but with the rehearfall of some few of the most principall which I account the Crowne-emperiall, the worthiest of all flowers both forraine and homebred, it is the delicatest and strangest; It hath the shape of an imperiall Crowne and will be of divers colours according to the art of the Gardener, in the midst of the flower you shall see a round pearle stand, in proportion, colour and Orientnesse like a blew naturall pearle, onely it is of a soft liquid substance. This pearle if you shake the flower never so violently will not fall off, neither if you let it continue never so long, will it eyther increase or diminish in the bignesse, but remaineth all one, yet if with your finger, you take and wipe it away, in lesse then an houre after you shall have another arise in the same place and of the same bignesse; this pearle if you tast it upon your tongue, is pleasant & sweet like home; This flower when the Sunn riseth you shall see it looke directly to the East, with the stalks bowed low thereunto, and as the Sunne riseth higher and higher, so the flower will likewise arise, and when the Sunne is come into the Meridian or some point which is directly over it, then will it stand upright upon the stalk and looke directly upward, and as the Sunne declineth so will it likewise decline, and at the Sun setting looke directly to the West onely. The sides of this flower are very tender, and therefore would be carefully sowne in a very rich and fertill Earth, well broken and manured. The seasons most mete for the same is the latter end of March, Aprill, or May, for the flowers flourish most in May, June and

**July.** As soon as it is sprung an handfull above the earth, you shall remove it into a fresh mould, and that will make it flourish the better: The roote of this flower is like an Apple, or great flat Onion, and therefore in the replanting of it you must be careful to make an hole large and fit for the same, and to fire the mould gently and close about the same: In the winter it shrinketh into the earth, and is not at all to be discerned, by meanes whereof I have seen divers (supposing it to be dead) to digge up the earth, and negligently spoyle the roote; but bee not you of that opinion, and in the Spring you shall see it arise and flourish bravely.

The Dulippo.

Aspert to this I place the Dulippo or Tulippo, which is but a little sort of the Crowne-Emperiall in pleasantness, beauty, and rareness, so; you may have them of all colours whatsoever, in such sort as was shew'd you for the Gillyflowers, Lillies, and other rootes; they are tender at the first, springing from the seed, and therefore must be sowne in a fine rich mould in the warmth of the Sunne, either in March, Aprill, or May; but after they are once sprung above the ground, they are reasonable hard, and will defend themselves against most weathers. The roote of this flower is shaped like a Pearce, with the biggest end downward, and many small threds at the bottom, therefore you must be sure when you remove or replant it, to cover all the roote in fresh mould, and let not any part of the white thereof be uncovered. This flower by sowingly replanting, you may have to flourish in all the Spring and Summer Months in the year; so; in the dead of winter it shrinketh into the ground, and is not at all to be perceived. The stalks of these flowers are weak, therefore to support and defend them from the shakings of the winds, you must make little cradles of small sticks in such wise as you did so; the Gillyflowers.

The Narcissus.

The Narcissus is a very curious & dainty flower, and through his much variety & alteration in growing, they are supposed to be of divers kinds, but it is not so, so; in as much as they are seen to be of divers colours, that is but the Act of the Gardener, as is before exprest in other flowers; & whereas some grow single, some double, & some double upon double, you shall understand that such a; grow single, grow simply from the seed onely; those which



which are double & no more, are such as have bene planted and replanted, the small thynds of the rootes being clipt away, & nothing being left about it that is superfluous; & those which are double upon double, are the double plants grafted one into another. This flower loveth a rich warme soyle, the mould being easie and light: It may be sowne in any Month of the Spring, & will flourish all the Summer after: Before it appeare above ground, it would be oft watred, but after it skills not how little, for it will defend it selfe sufficiently. Not unlike unto this are your Daffadills of all kinds and colours, & in the same earths & seasons delighteth either to be sowne or planted, & will in the same manner double and redouble his leaves. Many other foreign & strange flowers there are, but the order of their planting differeth nothing from these which I have already declared, being the most tender and curious of all other; onely I wil advise every skilfull Gardener, that when he shall receive any seed from any foreign Nation, to learne as nere as he can the nature of the soyle from whence it cometh, as hot, moyt, cold, or dry; and then comparing it with his owne, solve it as nere as he can in the earth & in the seasons that are nextest to the soyle from whence it came; as thus for example. If it came from a clyme much hotter than his owne, then to sow it in a sandy mould, or other mould made warme by the strength of Manure, in the warmest time of the day, & in those Months of the Spring which are warmest, as Aprill or May: you shall let it have the Sunne freely all the day, & at night with mats, penthouse, or other defence, shield it from sharpe winds, frosts, and cold dewes.

An excellent advise.

I have seene diverse Noblemen, & Gentlemen (which have bene very curious in these dainty flowers) that have made large frames of wood, with boards of twenty inches deepe, standing upon little round wheeles of wood, which being made long, square, or round, according to the Masters fancy; they have filled with choyce earth, such as is most proper to the flower they would have grow, and then in them solve their seeds or set their plants, in such sort as hath bene before described, and so placing them in such open places of the Garden, where they may have the strength and violence of the Sunne

A new manner of planting and transporting flowers and fruits.

Summe all the day, and the comfort of such moderate showers as fall without violence or extraordinary beating, and at night draw them into some low vaulted Gallerie ioyning upon the Garden, where they may stand warme and safe from frozmes, windes, frosts, delues, blastings, and other mischeiues which euer happen in the Sunnes absence. And in this manner you may not onely have all sorts of daintie foraine flowres, but also all sorts of the most delicatest fruites that may be, as the Orange, Lemon, Pomegranate, Citheran, Cinamon, Allmond, Myne, or any other from what clime soeuer it be deriued, obseruing onely but to make your frames of woode (which contains your earth) deeper and larger, according to the fruite you plant in it, and that your Alleyes throug which you draw your Trees when you house them, be smooth and leuell, least being rough and uneven, you sogge and shake the rootes with the waight of the trees which is dangerous.

Also in these frames of woode I have knowne whole Gardens of fruites and flowres conuayed beyond the Seas, as from England into Denmarke, from Italy and Fraunce into England, and so to other Nations.

Now for such flowres or fruits as shall be brought from a colder or more barraine ground then your one, these needeth not much curiositie in the planting of them, because a better euer bringeth fourth a better increase; onely I would wish you to obserue to give all such fruites and flower the uttermost libertie of the weather, and rather to adde coolnesse, by shaddow, then increase any warmth by reflection, as also to augment showers by artificiall watrings, rather then to let the roote dry for want of continuall moisture.

**T H A R.** But many times we see Gardens be destroyed with wormes and vermine, what remedy have you for this?

**M A R I V S.** Of the faults of the ground, and the remedy thereof, as the amending of either too much moisture or drynesse: I spake in the beginning, touching wormes, flies, and other vermine that annoy the Gardens, which for the most part are these. Caterpillers, Snailles, Bees, Wice, Gnats, and Antes. There are that say, that if you mingle with your  
sades

serues sake, as the Juice of Houselake, or Singrün, the Caterpillers will not meddle with the herbe that springeth of such sacle: and that they will doe no harme to your Trees, if you sprinkle them with the water wherein the ashes of Vines hath bene laid: moreover the stalkes of Garlicke made in bundles, and burnt in Orchards or Gardens, destroyeth the Caterpillers. They will not breed (as they say) if you burne about the rootes of your herbes or Trees, quicke brimstone and lime: the same they report of Lie made of the figtree. Ants will not annoy your come or hearbs, if you encompassse it round with Chaffe, or put into their hills, the ashes of burnt Snailles, and if some of them be taken & burnt, the rest will not come nere the saviour: if Asa foecida be laid in Dyle, and powred upon their hills, it utterly destroyeth them; they will not touch the trees nor the hearbs, if you annoynt the stalkes with bitter Lupines, or lime laid with oyle. You must shake off the Caterpillers in the morning, or late in the evening when they be numbed: also water wherein Will hath bene sodden, cast about the Orchard when it is colde, destroyeth them. It is written, that if you set Chiches about your Garden, Caterpillers will not breed, and if they be already bred, you must seeth the juice of Wormewood, and cast among them. The dung of Bullockes burnt upon the coales, destroyeth Gnats: the like also doth brimstone: a sponge wet with vinegar and hanged up, draweth also swarmies of Gnats unto it: also the maw of a shepe new killed, not washed nor made cleane, if it be laid in the place where Moths, or other such vermine doe use, and covered a little the upper part, you shall after two dayes finde all the noysome vermine crept into it: thus must you doe twise or thrise, till you thinke you have destroyed them all. Of killing and driving away Moles, Sotion the Greekes writeth, that you must take a Put, or any like fruit, & making it hollow within, fill it up with Chaffe, Rozen, and Brimstone: afterward stoppe the vent holes that the Mole hath in every place, that the smoake breake not out, onely leaving one open, where you shall lay the Put, in such sort as it may receiue the winde on the backe part, that may drive the smoake into the Moles; there are also traps to be made, for the destroying of Moles: a frame

Against  
Caterpillars

Gnats.

Moles.

Mise.

Garden  
Flies.Thunder  
and light-  
ning.Toades and  
frogs.The greene  
fly.

frame is to be set upon the new Hills, with a peece of wood so hollow and framed, that it may receive (as it were in a sheath) another peece of wood made in fashion like a knife, to this is ioyned another little sticke that lieth in the hole, and is fastned to a Catch without, that as soone as the Hole toucheth the sticke within, the is taken presently, as it were, with a payze of sheares. These are taken, if y<sup>e</sup> powze into a platter, the thickest mother of Dyle, and set in the house a night, as many as come at it are taken: also the roote of Bearesfoot mingled with Chæse, Bread, flowze, or grease, killeth them. Arte and very sharpe Vinegar mingled with the juice of Penbane, and sprinkled upon the Hearbs; killeth the Fleas, or little blacke wormes that be in them. No kinde of vermine will annoy your Hearbes, if you take a good sort of Cresshes, and cast them in an earthen vessel with water, suffering them to worke abroad in the Sunne for the space of ten dayes; and after with their liquour sprinkle your Hearbes. Next these or rather greater then any before going, is the offence of Thunder and lighting which in a moment killeth all sorts of flowers, plants, and Trees even in the height of their pride and flourishing, which to prevent it hath bene the practise of all the ancient Gardiners to plant against the wals of their Gardens, or in the midst of their Quarters where their choysell flowers grow, the Laurell or myrtre which is ever held a defence against those strikings.

Next I place Toades and Froggs, which are exceeding poisonous and great destroyers of young plants, chieflie in their first appearing above the ground; and the ancient Gardners have used to destroy them by burning the fat of a Stagge in some part of the Garden Beds, from which Earth all creatures that have poison in them will flee with all violence, other Gardeners will watch where the Byt pearceth on nights, and gathering up her dung scatter it upon the bedds eyther simple, or mixt with the shavings of an old Harts horne, and no venomous thing will come nere it.

The greene Flye of all Flies is held the worst, and is most grædie to hurt Herbes and plants, therefore to destroy him take Penbane leaves, Houselæke and Hints, and beat them in a mortar

Wormes, then straine forth the iuyce and adde thereto as much Vinegar as was of all the rest, and therewith sprinkle your Beds all over, and the Crane flye will never come nere them: Some hold opinion, that if you plant the hearbe Alet in your Garden, that it is a safe preservative against these Greene flies; for it is most certaine that the very smell thereof will kill these and most sorts of all other flies what euer, as hath bene found by approved experience and the sytes of old ancient Abby Gardens, whiche a man shall seloome finde without this hearbe planted in them.

Wormes: Wormes are very pernicious in a Garden, for Mothes they destroy both seedes and plants, and there is no better or more certaine way to kill them, then by taking cild hoxs hoxes and burning them, with the smoake thereof to perfume all the places, where they abide, & it will in an instant kill them.

Cankers are a kind of filthie wormes which deuoureth both the great and small leaues of all sorts of swete plants, especially Lettuce, Cabbage, Coleflowes and such like, and the way to destroy them is to scatter amongst your plants Cow dung, or to sprinkle the iuyce thereof with a wise of Rue over all the beddes: and though some with a rustie knife, use to scrape them from the leaues, and so kill them on a tileheard, yet for my part I hold this the nerer way, and both more certaine and more easie. Thus I haue shewed you the perfection of my Garden which was perfected with much labour, long erpence of time and not a little cost, I will now deliuer you a little tract on Method how for the entertainement of any great person in any park or other place of pleasure, to make a compleat Garden in two or thre dayes.

THAT. God his proceede.

MARIVS. If you shall entertaine any noble personage to whome you would give the delight of al strange contentment either in park or other remote place of pleasure, nere unto Ponds river or other waters of clearenes, after you haue made Arbours & Summer Bowlers to feast in, the fashon whereof is so comon that every laborer can make them, you shall then marke out your Garden plot, bestowing such sleight fence thereon as you shall thinke fit, then cast forth your Alleys and deuide them from the Quarters by paring away the Greene swarth with a paring spade

space finely and even by a direct line, then having store of labourers, cast up the quarters, then breaking the mould and levelling it you shall make sad the Earth againe, then upon your Quarters you shall draw forth either knots, armes, or any other devise which shall be best pleasing to your fancie, as eyther knots with single or double Trayls or any other emblemicall devise, as Birds, Beasts and such like; and having trenched those devises prettie deepe, then instead of herbes to set in them, take greene sods of cleane short grasse, and cutting it proportionably to the knot, lay them into the trench and joining sod to sod close and artificially, you shall set forth your whole knot or the portrature of your armes or other devise; and then taking a cleane broome that hath not formerly bene swept withall, you shall brush all uncleanness from the Grasse, and then you shall behold your knots as compleat and as comely as if it had bene set with herbes many yeres before. Now for the portrature of any living thing, you shall cut it fourth joining sod unto sod, then afterwarde place it in the earth: now if in this plot of ground (which you make your Garden) there be eyther naturall or artificiall Mounts or Bankes, then upon them you may in the selfesame sort with greene sods set forth a sight eyther at the field or River, or the manner of hunting any chaffe, or any historie of other devise that you please, onely in working against Mounts and bankes you must observe to have many small pinnes to stay your worke and keepe your sods from slipping one from the other till such time as you have made every thing fast with earth, which you must ramme very close and hard. As for flowres or such like adoznements, you may (if the time of the yere serve) the morning before remove them, with their earth, from some other Garden, and plant them at your pleasure, or otherwise you may adorne it with artificiall flowres made of hoynes and such like stuffe and usuall to be bought in many places, as also artificiall frutes made of Bladders, paper or paste and coloured unto the life. Now if you will adorne this Garden with divers colours eyther to distinguish armes, knots, or the earth it selfe, you shall thus make your colours; first for yellowe it is eyther made of yellowe clay usuall almost to be had almost in every place, or the yel-

The marking of colour

lowest

lowest Hand, as for want of both of your Flanders stile which is to be bought of every stonemonger, or Chauldier, and any of these, you must beat to dust; white you shall make of fine Chalhe beaten to dust, or of well burnt Plaster, or for necessity of the whitest Lime, but that will some decay; Blacke is made of your best and purest charcole dust well clenfed and sifted. Red is made of broken uselesse well burnt Bricks beaten to dust, and well clenfed from spots; blew is to be made of white Chaulke and blacke cold dust mixed together, till the Blacke hath brought the white to a perfect Bleynesse. Lastly Greene; both for the naturall proprietie belonging to the Garden, as also for better continuance and longlasting, you shall make of Greene Wood, or Camomile well planted where any such colour is to be used: as for the rest of the colours you shall sift them and sow them in their proper places, then with a flat beating beestell you shall stre it fast upon the face of the earth.

There be other wayes of beautifying Gardens, as to distinguish the knots either with Tileheards, with the Shankbones of shepe, and other small cattell, with great Coggesstones, and a world of other things like unto these. But I keepe you long in this ill-favoured Garden, if it please you we will walke into the Orchard adjoining.

Both the Garden and the Orchard as you see are inclosed with severall hedges and ditches, whereby they are defended from hurtfull beasts and unruly folks (as I told you at the first) when I began to speake of the inclosing of Gardens and Orchards.

Some doe grow and spring of themselves; a number of others againe are to be sowne. Those that grow wilde without the labour of man, doe beare their seedes each one according to his kinde: but those that are set and dyall, doe yeld greater increase. There are divers againe that are alwayes greene and doe never lose their leafe, which are (as Constantine repository) those, the Date, the Figge, the Lemon, the Citron, the Bay, the Olive, the Cypresse, the Vine, the Holly, the Worr, the Myrtill, Cedar, and Juniper. As for strange Trees, and those that will growe as in others but at home, we will not meddle withall: we will therefore begin first with those that yeld us fullenance, a beere fruit,



fruit, and these are diuided into three sorts: for either of the Trees they come to be Trees as the Olive is, or else Shrubs as the wilde Date, or neither Trees nor Shrubs, as the Vine.

**T H R A.** I desire to heare your opinion of every sort, for I thinke it no small skill to plant such faire Gardens, Orchards, and Vineyards. Methinks you haue used a wonderfull good order, that amongst your Vines, you haue intermedled Olive trees, Figgetrees, Almonds, and Appercoes, and that you haue severed your Orchard from your Garden, & your Vineyard from them both, with faire hedges and ditches.

How to  
make an  
Orchard.

**M A R I V S.** It was needfull so to doe, least my folks labouring in some of them should come into the rest, contrary to my pleasure. First, if you will, I will speake of those that bring us fruit, and then of the wilde, and the order of setting and planting of Woods. First (as Columella saith) that ground that serueth for an Orchard, will serue for a Vineyard, as you see it doth here; and if the ground be hilly, rugged, and uneven, it is moze mete for a Vineyard than for an Orchard. If therefore you will make an Orchard, you must chose such a ground as is mete for it: a rich ground, leuell, and lying upon the Sunne, which when you haue found, you must well enclose it: as I taught you before in the enclosures of Gardens, that it may ly out of danger of Cattel and knaves: for although that the trampling, and dunging of Cattel, is not impossibable to the Trees, yet if they be either bruised or broken whyles they be young, they will come to nought. When you meane to dyke your Orchard place thus fenced, you shall make your furrowes a yare before you plant them, so shall they be well seasoned with the Sunne & the eaine: and whatsoeuer you plant, shall the sooner take. What if you will needs plant the same yare that you make your furrowes? Let the furrowes be made at least two moneths before: after fill them full of straw and set it on fire. The harder and wider that you make your furrowes, the faster and more fruitful will your trees be, and the fruit the better. Long furrowes will be made like an oven, or furnace, wider at the bottom then above, that the rooke may spread the better, and the colde in winter and the heate in summer, may the better be kept from it, and also in hard grounds, the earth shall not so easily be washed away. In setting

of your fruit trees and vines, you must place the most order, y<sup>e</sup>ther Chercherioke, or Pershoke: which need full order of setting, is not onely profitable, by receiving the ayre, but also very beautifull to the eye: when as which way soever you take, you shall see them stand in rank, and which also is to good purpose, for the Trees shall equally receive their moisture from the ground.

I have used two sortes of this catted order, one wherein my Trees stand fours square like the Chequer or Chessboard: the other not in square as the first but Looking-wishe or Diamond-wise, like the glasse windowes or Nets. You must frame it according to the nature of the trees, least the lower sort be shadowed of the higher. You must also set them a good distance asunder, that their branches may spread at pleasure, for if you set them too thicke, you shall be able to see nothing betwixt them, and they will be the lesse fruitfull. Wherefore Palladius would have the space betwixt them, thirty foote at the least: there is more profit in the generall disposing of them, entermedling the greater with the lesser, so as the great ones doe not annoy the smaller, either with their shadowes or dropping, so that they grow not equall to them in strength or bignesse. Pomegranats and Apples must be setted naxer together, as nine foote asunder, Apples naxer then they, and Peares naxer then them both: but of them there are sundry sortes. Almonds and Figges must also be set naxer. And because there is a naturall friendship and love betwixt certain Trees, you must set them the naxer together, as the Vine and the Olive, the Pomegranate and the Apprell. On the other side, you must set farre asunder such as have mutuall hatred among them, as the Vine with the Silbert and the Bay. There are some of them, that desire to stand two y<sup>e</sup> two together, as the Chestnut: the droppings also do great hurt of all sortes, but specially the droppings of Oakes, Pinetrees, and spall holmes. Moreover, the shadowes of others of them are hurtfull, as of the Walnut tree, whose shadow is unwholesome for much, and the Pinetree that killeth young springs: yet they both resist the winde, and therefore are best to be set in the outer sides of the Orchards, as hereafter shall be said. Of the place of the order, perhaps you thinke I have said enough, and like that I should proceed to the order of planting and setting.

Dropping  
of trees.

Friendship  
amongst  
Trees.

Shadowes  
of Trees.

Time of  
planting.

Time for  
grafting.

The ob-  
servation  
of the  
Moone.

The kind  
of plan-  
ting, and  
grafting  
of trees.

Three  
kinds of  
Grafting.

What  
trees are  
best to be  
grafted be-  
twixt the  
bark and  
the wood.

What  
trees a-  
gree best  
together.

Understand then, the chiefest time of planting (as Florentine saith) is the end of Summer, for then is nature most occupied about the roots, as in the Spring about the upper parts: and therefore grafting is meetest in the Spring, and setting in the end of Summer: for the plants are watered all the Winter, & therefore it is best setting or planting, from the setting of the seven stars untill the twelfth of December. In the Spring time, you may set those things that you sowed before: at what season soever it be, looke that you set them in the afternoon, in a faire westerly winde, and in the wane of the Moone. Pliny saith, that this note is of great importance for the encrease of the Tree, and goodnesse of the fruit. If the tree be planted in the encrease of the Moone, it groweth to be very great: but if it be in the wane, it will be smaller, yet a great deale more lasting.

The plant eyther by Grafting, setting of the hermel, or the Stone, setting the rootes, stocks, or slips, grafting betwixt the Barks and the Tree: some are planted in some of these sorts, other in all. In Babilon (as they say) onely the lease set, comes to be a tree: first I will speake of Grafting, and then of the rest. There are that appoint but three kinds of Grafting, betwixt the bark and the wood, in the stocks, and implastering, or inoculation. The first sort they call Grafting, the second imbanching, the third inoculation, or imbudding. Such Trees as have thickest barks, and yald most sappe from the ground, are best grafted betwixt the bark and the wood, as the Figge, the Cherie, and the Olive: those that have thin rindes, and content themselves with lesse moisture, as if the sappe leaving the bark should gather it selfe to the heart, as the Drenge tree, the Apple tree, the Vine, and others others, in these it is best to open the stocke, and graffe the wood. Some Trees are also best Grafted upon other some, the Figge that prospereth best upon the Mulberry stocke, and the Plane tree: the Mulberry upon the Chestnut, and the Beech, the Apple, the Pearre, the Elm, and the white Poplar, wherein if you graffe, you shall have your Mulberries white: upon the same stocke are grafted the Pears, the Quince, the Medlar, and the Serbille: the Pearre upon the Pomegranate, the Quince, the Mulberry, and the Almond. If you

Graffe

Grafte your Peare upon a Filbert, you shall have red Peares: To have  
the Apple is Grafted upon all Peare Stockes, and Crablets, <sup>red Peares</sup>  
Willow, and Poplar: being Grafted upon the Quince, it <sup>& Apples,</sup>  
bringeth forth the fruit which the Crackes call Melimella: it is  
also Grafted upon the Plumtree, but being Grafted upon the  
plane tree, it bringeth forth red Apples. The Hedlar being  
Grafted upon the Thorne, the grasse groweth to great big-  
nesse, but the stocke continues small: upon the Pine-tree, it  
bringeth a sweet fruit, but not lasting. The Peach grafted  
in the Thorne or the Birch, groweth to be very saice, and great:  
the Almond and the Peach being ioyned together, and grafted <sup>A Peach</sup>  
in the Plumtree, will beare a Peach with an Almond in the <sup>with an</sup>  
stone. The Filbert will onely be grafted in the Wilding, not <sup>Almond</sup>  
agreeing with any other. The Pomegranate delighteth in di-  
vers stockes, as in the Willow, the Bay, the Ashe, the Dam-  
son, the Plum, and the Almond, upon all which he prospereth  
well. The Damson groweth very well upon any kind of wilde  
Peare, Quince, and Apple: the Chestnut liketh well the Wal-  
nut, and the Birch. The Cherrie refuseth not the companie  
of the Peach, nor the Turpentine, nor they his: the Quince  
will well be grafted upon the Barberie: the Pertile upon the  
Sallow: the Plum upon the Damson: the Almond upon the  
Filbert: the Citron, because of his tender Tree, and thinne  
rinde, will scarcely beare any other grasse, and therefore con-  
tents himselfe with his owne branch. The Vine that is graf-  
fed upon the Cherrie tree (Florentinus promisseth) will beare  
Grapes, & grafted upon the Olive, which bringeth forth a fruit  
that bearing the name of both his parents, is called Elaeos-  
philos. In fine, all young Trees that have sap in the barke, may <sup>Olive</sup>  
be grafted: if it be greater, it is best grafting nere the roote, <sup>grape.</sup>  
where both the barke and the wood, by the reason of the nearenes  
of the ground are full of sappe. He then that will graft either in  
the stocke, or betwixt the stocke and the rinde, let him gather  
his grafts from a fruitfull tender tree, and full of ioynets, and out  
of the new spring, except he meane to Gasse an old tree, when  
as, the sturdier Grasses be, the better they are, otherwise the  
last shotes of such trees as have lately borne will be the best. You  
must gather them on that side the tree that lyeth upon the

The choise  
of Graf-  
sing.

The knots.

The time  
of grafting.The man-  
ner of  
grafting.

South: others like better the East side than the Shadowy. Virgil forbideth those that groweth on the top, thinking them better that growes out of the side. To be short, your grasses must be full of buds, lately growne out, smother, the rinde smooth, good, and readie to grow: they must be of the last yeeres groweth, which is knowne by the knots or ioynts, that declare every yeeres growth. Besides, Graftes of all trees are not to be gathered alike: For Vines and figge trees are dyest in the middle parts, and take best of the top, and therefore from thence you must gather your Graftes. Olives are fullest of sappe in the midst, and the outer parts dyest. Those best agree together, whose rindes are nearest of nature, and doe blossome, and beare both about a time. You must gather the grasses in the want of the Sunne, tenne dayes before you Grafte them. Constantine addeth this reason. That it is neede the Grafte doe a little wither, that he may the better be receiued of the stocke. You must appoint your grafting time in the spring, from March, when as the buds doe begin to burgen, but not come out (although you may graffe the Deare when his leaves be out) untill May: for Grafting in raine is profitable, but not so; imbranching. The Olive, whose Springs do longest bud, and have much sappe under the barked, the abundance whereof both hurt the Grafte, must be Grafted (as Florentine sayth) from May, till Iune. Columella would have the Olive Grafted from the twelfe of March, till the first, or the first of Aprill, and the time of Grafting to be the Moone increasing, in the afternoone, when there bloweth no Southwinde. When you have found a good Grafte, take your knife (being very sharpe) and pare it about thre fingers from the ioynt downward, so much as shall be meete to be set in the stocke: that part that is under the ioynt (not perishing the pith) you must cut with your knife, as if you should make a pen, so as the wood with the wood, and the barked with the barked, may ioyne together, as fast as may be. Which being done, if you meane to graffe in the stocke, you must first sawe it smooth, & then cleave it in the midst with a sharpe knife, about thre fingers: and to the end you may handsomely put in your Grafte, you must have a little wedge of wood or iron. (Pliny thinkes it better of bone) which wedge (when you will graffe

grasse betwene the rinde and the stocke ) must be made flasse on the one side, and round on the other, and the Grasse must be pared also flat on that side that must stand next the wood, taking alwaies good heed, that the pith be not perished: the other part must onely have the rinde pulled off, which after you must set in the cleft, or betwixt the barke, till you see all parts agree together. Some doe cut the point of their Grasse thus square, so as two sides are bare, and the other covered with his barke: and in that sort they use to Grasse in a stocke one against another: but it is thought best to Grasse no more but one. When you have thus set in your Grasse in the stocke, plucke out the wedge: but here is a great carefullnesse, and hard to be used: and therefore good Grasters, thinke it best to hold the Grasse evert with both hands, least in the binding and pulling out of the wedge, the Grasse be hurt, or stand uneven. For avoiding of which, some use so to binde the stocke about, and after to put the wedge, the hands keeping it from opening too wide. The harder they be set in, the longer will they be ere they beare, but will indure the better: you must take heed therefore, that the cleft be not too slacke nor too straight. When you have thus Grased, binde the stocks with a twig, and cover it with loame, well tempered with chaffe, two fingers thickness, and (putting mosse round about it) tye it up so, that there come no raine at it, nor be hurt with the sunne or the winde. This is the order both in the old time, and at this day used: though in Columellas time (as it appeareth) they were not wont to Grasse, but onely betwixt the barke and the wood: for the old people (as Plinie writeth) durst not as yet meddle with cleaving the stocke: at length they presumed to make holes, and Grasse in the pith, and so at last wared bold to cleave the stocke. Cato would have the stocke covered with clay and chalke, mingled with sand and Dre-dung, and so made in morter. Sometime they Grasse with the top of the Grass downeward, and they doe it to make a little Tree sprout in breadth. It is best Grassing next the ground, if the knots and the stocke will suffer: and Plinie would have the Grasse grow forth not above sixe fingers. If you will Grasse a little Tree, cut it nere the ground, so as it be a foot and a halfe high. If you would carry your Grasse farre, they

To keepe  
your  
Grasse

will longest keepe their sappe, if they be thrust into the rinde of a Kape: and that they will be preserved, if they lye betwixt two little guts, running out of some River or fish pond, and be well covered with earth. Now for inoculation or implastring which is no new manner of grafting, we finde that it was used of the Latines, and the Greeks, when taking off a leafe or little bud, with some part of the rinde with him, we graft it into another branch, from which we have taken as much backe. This order (Columella saith) the husbandes in his dayes were wont to call Implastring, or Inoculation: and before Columellas dayes Theophrastus in his Booke De causis Plantarum, doth shew the reason of Inoculation. Plinie doth say it was first learned of Dawes, hiding of sappe in caves and holes of Trees. This kinde of Grafting, as Columella doth write, and our Gardners themselves confesse, is best to be used in Summer, about the twelfth of June: yet Didymus saith he hath Grafted in this manner, and hath had good increase with it in the Spring time. And sith it is the faintest kinde of Grafting, it is to be used in all Trees, but onely in such as have a strong, a moss, and a sappe rinde, as the Olive, the Peach, the Figge, the Apple, the Pearre, the Cherrie, and divers others trees which are full of milke, and have a big backe. Of that Tree that you meane to Graft, chuse the youngest and the fairest branches you can, and in them take the bud that is likeliest to grow, and marke it round about two inches square, so as the bud stand even in the midst, and then with a sharpe knife cut it round about, and saw off the rinde, taking good heed you hurt not the bud, and take out the piece. Afterwards, goe to the Tree you meane to Graft on, and chuse likewise the fairest branch, and pare away the rinde a little space, and some in your buds full, as the rindes may agree together so close, as neither water nor winde may enter in. You must looke that you hurt not the Wood, and that the rindes be of one thickness. When you have thus done, binde it up, so as you hurt not the bud: Then clay it over all, leaving libertie enough for the bud. Cut off all the Spring that growes about it, that there be nothing left to draw away the sappe, but that it may onely serve the Graft: After one and twentieth dayes, unloose it, and take off your



your coting. and you shall see your bud incorporated in the  
branch of a strange tree. Columella speaketh of another sort  
of Grafting, to boze a hole in a Tree with an Augre, either to  
the pith, or the uttermost rinde, going something slopewise  
downeward, and getting out all the chips cleane, take a Vine, or  
an arme of the best Vine, not cut from his old mother, & paring  
away the over rinde, thrust it fast into the hole, being all moyst  
and full of Sappe, leaving a bud or two onely upon it; after-  
ward, stoppe the hole well with Masse and Clay, and commit  
it to the earth. In this sort you may Grafte Vines upon  
Elmes, so shall the branch live, being both nourished with the  
old Mother and the new Father. Two yeres after, you shall  
cut off the new grafted branch, and the stocks wherein you  
grafted, you shall sawe off a little above the bozing, so shall the  
graffe become the greatest part of the plant. The like doe our  
Countreymen, taking a branch of a Beech a fote thicke: and  
when they have cut it, and bozed it, they set in it the branches  
of the best Beare or Apple that they can get, setting the same in  
a very wet ground in March; and in the same Moneth the yere  
after, taking up the Beech, they cut it asunder with a saw be-  
twixt the holes and the branches: and every peece of stocke  
with his branch, they set in very rich and fruitful ground.  
There are some that bring of another kind of grafting, not much  
unlike to the former, wherof notwithstanding, African in Com-  
stantine maketh mention, as tried in a Peach. They will a  
man to take the branch of a Willow as big as your arme,  
and two Cubits in length, or more: this they would have you  
to boze through the midst. and after slipping off the branches of  
a Peach as he stands, leaving onely the top untouched, they  
would have you to make the Peach passe through the Willow  
basse, and that done, so boze the Willow like a beke, setting both  
his ends into the earth, & so to binde the hole up with masse, mas-  
ter and bands. The yere after, when as the head of the Peach  
hath joynd himselfe with the pith of the Willow, that both the  
bodies are become one, you shall cut the Tree beneath and re-  
move it, and raise up the earth, so as you cover the Willow bow  
with the top of the Peach; & this shall bring you Peaches with-  
out Stones. This kind of Grafting must be done in moist pla-

Wimble  
Grafting.

Another  
manner of  
Grafting.

Propagati-  
on, and his  
kinder,

res, and the Willowes must be holpen with often watrings, that the nature of the Tree may be of force. The kinds & manners of propagation, are declared by Pliny, who telleth of two kindes: the first, wherein a branch of the Tree being bowed downe, and buried in a little furrow, and after two yeeres cut off, and the plant in the third yeere removed: which if you intend to carrie any far distance off, it is best so; you to burie your branches in Baskets, or earthen vessels, in which you may aptest carrie them. And another more delicate way he speaketh of, which is to get the roote out of the very Tree, laying the branches in Baskets of earth, and by that meanes, obtaining rootes betwixt the very fruit and the tops, (for by this meanes the root is fetched from the very top, so farre they presume) and from thence fetch them, using it as before: in which sort you may also deale with Rosemarie and Savine. Columella sheweth a way, how slips of all manner of Trees may be grafted in what Trees you list.

THRA. And some are also set of the slips, or sliings: my selfe have plucked a branch from a Gulberrie Tree, and binding the end a little with the Mallet, have set it in the ground, and it hath growne to be a faire Tree. The like hath bene tryed (as they say) in Apples and Ideates.

MARIVS. You say well, for Nature hath shewed us, that the young shences, plucked from the rootes of the trees will grow: the youngest are best to be planted, and so to be pulled up, as they may bring with them some part of their mothers body.

In this sort you may plant Pomegranats, Filberts, Apples, Servises, Medlars, Ploms, Figges, but specially Vines, and sometimes Cherries, and Pyzilles. Of the Rocke and the branches are also planted the Almond, the Pearce, the Gulberry, the Orange, the Olive, the Quince, the Ivie, and the Turkish Plome: which the oftner you remove them the better they prove. Pliny sayth, the branches cut from the Tree, were at the first onely used for Hedges; Elder, Quinches, and Wyers, medled together: afterwards for use, as the Poplar,

the Alder, and the Willow; at this day we set them where we best like. We must be taken, that the stocks, or the sets be of a good kinde, not crooked, knottie, nor soyled, nor slenderer then that a man may well gripe with his hand, nor lesse then a fote in length.

THRA. It remaineth now that you speake of the setting of the fruit or kernell.

MARIVS. Nature (as Pliny saith) hath taught us to set the kernell, by the sides devoured of Birds, and moistned with the warmth of their enthailes, and after voided in the boughes and rises of Trees: wherby we finde many times a Plane Tree growing out of a Sage, a Bay out of a Cherry, and a Cherry out of a Willow. Many Trees are set of the fruit, kernell, or stone, which grow yearly of themselves, by reason of the falling of the fruit: as Chestnuts, Hasefnuts, and Walnuts. Columella saith, they are the fruitfuller Trees that spring of their fruit, then those that are set of the stocke, or the branch. Some delight to be set in Trees, and not in the ground: when they have no soyle of their owne, they live in a stranger. Of the fruit are kernell or planted Nuts, Almonds, Pistaces, Chestnuts, Damsons, Plums, Pineapples, Dates, Cypress, Bayes, Apples, Pears, Maples, Fittrés Cherries, Peaches, & Abzicoakes: but set or planted they pprove to be the kindlier. Some of these doe grow in Grafting and other wayes: experience teacheth, that the Nut and the Cere'suth are Grafted; and Demageron witnesseth as much: neither are all fruits, kernells, and stones set in like sort, as hereafter shall be seene. Some are laid in water before, others not: some lye three dayes in hony and water, and at the fall of the lease are buried in the ground till March: and then set Nuts are onely layd in moyst dung a day before, and of some in water and hony onely a night, least the sharpnesse of the hony destroy the sprout. Some are set with their toppes standing upward, as the Chestnut: others downward, as the Almond, though this is not greatly to be regarded, sith we see the fruit that fallles from the Tree, or is let fall by Birds, doth prosper best of any other.

Next, the ordering of an Impe Garden may not be Of Impe  
passed Gardens.

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passed over, wherein as in a Parke, the young Plants are nourished. And because the Sunne sometimes ought to be kinder, & tenderer than the Moone, a mate ground must be chosen for the purpose: that is, a ground dry, fat, and well laboured with the Spadocke, wherein the Strawger may be well cherished, and very like unto the soyle, into which you meane to remove them. The kernels, or stones, must not be altogether naked, but a little covered with some part of the fruit, so shall they afterward endure the longer. They must be set a fote, or thereabouts asunder: After two yeeres they must be removed: & because their rootes doe runne very deepe into the ground, they must be somewhat bent, or turned in, to the end they may spread abroad, and not runne downeward. Above all things, you must see it be free from stones and rubbish, well fenced against Poultry, and not full of chinkes, and clefts, that the Sunne burne not the tender rootes: they must be set a fote & a halfe asunder, that they hurt not one the other with their nere growing. Among other evils they will be full of Wormes, and therefore must be well taked and weeded: beside growing ranke, they must be trimmed and pruned. Care would have them covered over with Rattases upon sozkes, to let in the Sunne, and to keepe out the cold: Thus are the kernels of Peares, Wine-apples, Puts, Cypressse, & such others cherished. They must be gently watered for the first three dayes, at the going downe of the Sunne, that they equally receiving the water, may open the sooner. Zizipha, or Turkey Plumbs, Puts, Walnuts & Chestnuts, Bayes, Cherries, Pistachies, Apples, Dates, Peares, Bayles, Firces, Plumbs, and diverse others, are set of the stone, or kernels. In removing of them, have speciall regard, that they be set in the like soyle, or in better, not from hot and so:ward grounds, into cold & backward, nor contrary from thoe to the other. You must make your furrowes so long before, if you can, that they be overgrown with good mould. Mago would have them made a yeare before, that they may be well seasoned with the Sunne, and the weather: Or if you cannot so, you must kindle fires in the middes of them two months afore, and not to set them, but after a shewere. The depth of their setting must be in stiff clay or hard ground, three Cubites: and so Plumb trees a handfull more. The furrow must be made furnacelike, straight above, and broad in the

the bottome : and in blacke mould, two Cubites and a hand broad, being square cornered: never deeper than two fote and a halfe, nor broader then two fote broad, nor never of lesser depth, then a fote and a halfe, which in a wet ground will draw nere the water. Such as delight in the depth of the ground, are to be set the deeper, as the Albe, and the Olive: these and such like, must be set foure fote deepe, the others it sufficeth if they stand thre fote deepe. Some use to set under their Rootes round little stones, both to containe, and conuay away the water: others lay gravell underneath them. The greater Trees are to be set toward the North and the West, the smaller toward the South and the East. Some will have no Tree removed under two yeeres old, or above thre: and others when they be of a yeeres growth. Cato reſisteth Virgils authority that it is to great purpose to marke the standing of the Tree, as it grew at the first, and to place it towards the same quarters of the heaven againe. Others observe the contrary in the Vine, and the Figge tree, being of opinion that the leaues shall thereby be the thicker, and better defend the fruit, & not so soon fall: beside, the Figge tree will bee the better to be climbed upon. Whereover, you must beware that by long carrying, the rootes bee not withered, nor the winde in the North when you remove them, whereby many times they dye, the husband not knowing the cause. Cato condemneth utterly all manner of windes or stormes, in the removing of Trees, and therefore it is to great good purpose to take them up with the earth about them, and to cover the rootes with a Turffe, and so; this cause Cato would have them to be carryed in Baskets filled with earth up to the toppe: the Tree must so be set, as it may stand in the middle of the Trench, and so great haire must bee taken of the rootes, that they be not broken, nor mangled.

Among all Trees and plants, the Vine by good right chal- The Vine,  
lengeth the soveraignty, seeing there is no plant used in husbandry more fruitfull and more commodious than it, not onely for the beautifullnesse, and goodlinesse of the fruit, but also for the easinesse he hath in growing, whereby hee refuseth not almost any kinde of Country in the whole world, except such as are too extremely scorched with the burning heate of the Sun,

as else too extremely frozen with the vehement cold; prospering also as well in the plaine and champion Countrey, as it doth upon the hilly and Mountain Countrey: Likewise as well in the stiffe and fast ground, as in the soft and mellow ground: And oftentimes in the Roamy and leane ground as in the fat and foggie, and in the dry, as in the moist and miry; yea, and in many places, in the very Rockes it groweth most abundantly and most fruitfully, as is to be sene & proved at this day about the Riber of Rhine in Germanie, and the Riber of Mosell in France: and above all this, it best abideth and beareth the contrary disposition of the heavens.

The invention of the Vine.

It was first found out by the Patriarke Noah, immediately after the drowning of the world: It may be, the Vine was before that time, though the planting and the use thereof was not then knowne. The Heathen both most falsly and very fondly, as in many other things, doe give the invention of the same unto the God Bacchus. But Noah lived many yeeres before either Bacchus, Saturnus, or Vranus were borne.

The Vineyard most gainfull.

There wants not great and learned men, that affirme the Vine to be most gainfull: and declareth that olde fruitfulnessse of the Vines, mentioned by Cato, Varro, & Columella, which upon every Acre yielded seaven hundred Gallonds of Wine, and the Vineyards of Seneca, wherein he had partly upon one Acre 1000. Gallonds: when as in Cozne ground, ~~where~~, as Wood land, if a man doe get upon one Acre xx. s. a yeere, it is thought a great matter.

The ordering of the Wine-bearing Vines, as the sorts of Vines are sundry, neither can they be contained in certaine numbers, so; there is as many sorts, as there is of ground. Homer giveth the chiefest prayse to the Wine of Moronia, and Pramnium. Virgill most commendeth Athenish wine: others the wine of Aminia, Lamentana, Candy, and Corsega, but I meane to speake of those that are commonly in our dayes. In Italy at this day they make most account of wine of Corsega, Romani, & Meyfina. In Spaine they best esteeme the wine of S. Martine, of Ribodari, and Gibraltar. In French the greatest prayse is given to the wine of Orleans, Anjou, & Greves: Germanie began but of late to meddle with planting of Vines, so; Varro writeth, that the

## of the ordering of Orchards. 151

the Frenchmen and Germanes had in his time both Vines and Olives: but at this day the Rhine, the Neckar, the Mene, Mosel, and Danaw, may compare with any Countries, for goodness of their Vines.

The Vine may be planted fike sundry waies: for either his branches are suffered to runne in safety upon the ground, or else without any stay grow upright, or having a stay or prop set for them, they climbe up by it; or else runne up by a couple of stiffe props, called of Livie a yoke, or else sustained with foure of those yokes, which of the resemblance that they have with the hollow gutters of a house, are said to be guttered: others againe suffered to runne upon frames like Arbours, serving to sit under, and are called Arbour Vines: others ranne up the walles of houses. Moreover, the yoked Vines, are tyed together, and joyned with thye or foure props, as if they were yoked: some doe let them ruane upon trees, as commonly in Lombardy, they are suffered to climbe upon Elmes, Willowes, and Albes, where they greatly prosper: neither doe they like all manner of trees, for they hate the Nut tree the Bay, the Radish, and the Coll: as againe, they love the Poplar, the Elm, the Willow, the Figge, and the Olive tree. The Vines that are yoked, or stayed up with props, receiue more ayre, and beare their fruit the higher, & ripe the better, but aske more trouble in the looking to: and these are so ordered, that they may be plowed, where by they are the more fruitful, because they may the oftner, and with the lesse charge be tilled. The Vines that creepe upon the ground, make much Wine, but not (as Columella saith) so good.

Trees which be friends or foes to the Vine.

**THE A.** Now to your ordering of them.

**MARIVS.** First, I will speake of the ground, and of the digging of it, and after of the planting and cutting of them. And first you must take for a speciall note, that every Vine will not agree with every place, nor yeld his Wine in like goodnesse, of such soyes is the qualitie of the ayre, neither will all kinde of ground serve: For Columella doth counsaile to set the Vine in a wilde ground, rather then where Corne or bushes have growne: for as for old Vineyards, it is most certaine, they are the worst places of all other to set new in, because the ground

The ordering of Vines.

What ground is best for the Vine.



is matted, and as it were netted with the remaines of the old rootes: neither hath it lost the poyson of the rotten and old stinking Rootes, wherewith the soile (glutted as it were with venime) is benumbed: and therefore the wilde and untilled ground is chiefly to be chosen, which though it be over-grown with shrubbes and trees, may yet easily be ridde. If such wilde ground be not to be had, the best is the plaine champion land without trees: if neither such a ground, then the light and thin bushie ground, or the ground. The last and worst (as I said) is the old rotten Vineyard, which if necessitie compell you to take, you must first rid the ground of all the old rotten rootes, and then cover it either with olde dung, or with the newest of any other kinde of manuring: the rootes being thus digged up, must be laid up together, and buried. After must the ground be considered, whether it be mellow and gentle: It is thought to be good, that is something gracie and gravelly, and full of small pebbles; so that it be mingled with fat mould with all, which if it be not, is utterly disallowed.

Dame Ceres joyes in heavy ground, and Bacchus in the light. You shall perceiue it to be massie and thicke, if being digged, and cast into the hole againe, it riseth over: if it scarcely fill the hole, it is a signe that it is light and thinne. The Flint, by the generall consent of husbandmen, is counted a friend to the Vine, specially where it is well covered with good mould: so being cold and a keeper of moisture, it suffereth not the rootes to be scalded with the heate of Summer: so much that Columell doth use to lay certaine stones about the side of the Vine trees, so that they exceed not the waight of five pound a peece: which as Virgill hath noted, heapes along the water in Winter, and the heat in Summer.

Hurl in the shifte stone, or therein throw the nastie shelles. So do we in the banks of the Rhine being full of those stones, to yeld an excellent good Wine: but the stones that lye a bove ground, are to be cast away: for in the Summer, being heated with the Sunne, they burne the Vine, and in the Winter they hurt them with their coldnesse, contrarie to those that lye in the bottome. But the best of all is the soote of an hill, which receiveth the falling mould from the toppes, or the bally,

bally, that with overflowing of Rivers hath bene made rich.  
 Neither is Chalkie ground to be refused, though the Chalk  
 of it selfe that Potters use, is hurtfull to the Wine. The  
 hungry sandy ground, the salt, bitter, and thirstie ground,  
 is not meete for the Wine: yet the blacke and reddish sande,  
 medled with some moyst earth is of some allowed well enough.  
 Forsober, neither ground too hotte, or too colde, too dry, nor too  
 moyst, too slender, nor too stiffe, that will not suffer the raine  
 to sinke, is to be used for Vines; for it will easily gape and  
 open, whereby the Sunne comming in at the crabbesses,  
 doeth burne the Vines: That againe which is overthinne,  
 letting in as it were by vents, the Raine, the Sunne, and  
 the Winde, doth drye up the moysture of the vines: the  
 thicke and stiffe ground is hardly to be laboured, the fat  
 ground subject to too much rankenesse, the lean ground to  
 barrenesse; wherefore there must be an even temperature  
 amongst these extremities, as is required in our bodies,  
 whose health is preserved by the equall medlie of heate and  
 colde, dryth and moysture, fulnesse and emptinesse, or thicke-  
 nesse and thinnesse: neither yet is this temperature in  
 ground for Vines so justly to be eved, but that there is re-  
 quired a more enclining to the one part, as that the earth  
 be more hot then colde, more drye then moyst, more subtil  
 then grosse, specially if the state of the Heavens agree. A-  
 gainst what quarter thereof the Vineyard ought to lye, it is  
 an olde controversie, some like best the rising of the Sunne,  
 some the West, some the South: Virgill misliketh the West;  
 others againe thinke the best lying to be upon the South.  
 But in generall, it is thought best in colde Countries, to  
 have it lye toward the South, in warme Countries upon the  
 East, in hot burning Countries, as Egypt and Barbarie, upon  
 the South. Plinie would have the Vine himselfe stand to-  
 wards the South, and his springs, or shotes towards the  
 South. A fit ground and well lying, being found out, must  
 be diligently digged, dounced, and weeded: all unprofitable  
 weeds must be pulled up, and throwen away, lest they should  
 spring againe: either corrupt the young plants, or hinder the la-  
 borer. The Wine is planted according to Virgils rule, in the fall

What  
 quarter of  
 the heaven  
 the Vine  
 must lie an-  
 gainst.

The time  
for planting  
of vines.

Grafting  
of vines.

What  
Graftes to  
be chosen.

of the lease, but better in the Spring, if the weather be rainy, or cold, or the ground be fat, champion, or a watrish valley: & best in the fall of the lease, if the weather be dry & warme, the ground dry and light, a barren, or a rugged hill. The time of planting, in the Spring (as Columella saith) endureth forty dayes, from the 3d of February, untill the Equinoctial: and in the fall of the lease, from the 3d of October, to the kalends of December. Cassian in Constantine, being taught by experience, saith, in watry grounds you should rather plant in Autumne, when the leaues are fallne, and the plants after the Winterage deliuered of the burden of their clusters, sound and strong, before they be nipped with the frosts, or then they best agree with the ground, nature applying her selfe wholly to the nourishing of the roote. The time of grafting, Columella saith, is of some extended from the first of November, to the first of June, till which time the shoot of grasse may be preferred: but it is not well liked of him, who rather would haue it to be done in warmer weather, when the Winter is past, when both bud and rinde is naturally moved, and is safe from cold, that might annoy either the Grasse, or the Stocke: yet he granteth (when haste requireth) it may be done in the fall of the lease, when as the temperature of the ayre, is not much unlike to the Spring: so; which purpose, you must chuse a warme day, and no wind stirring. The Grasse must be round and sound, not full of pith, but of buds, & thicke of ioynts, the Length whereof must not excede thre inches, and smooth, & eben cutte: the Stocke and the cleft must be well closed with clay and moile. Those that grow toward the South, must be marked.

The like is to be done with all other Trees. Of planting vines, there is two wayes, the one of the Rote, the other of the Branch, or Spray: The Rote is counted a great deale better then the Branch or set, by reason of the forwardnesse, &antage that it hath, in that it hath already taken roote. The Rote is set in stiff ground, well digged and laboured, in a trench of thre foot, the set or spray, in a gentle and mellow ground: in dry ground, it is neither good to set the Rote, nor the Branch in a dry season: it is best to plant in the fall of the lease in a hot season, & in a cold and moist, in the Spring: in much wet you must set it on this

net,

ner, in great brieth, thicker: in what sort you shall make a store Garden for Vines Palladius teacheth you. The set requireth a time to rote, & being removed will beare the better fruit. The rootes doe beare fruit the second yere, & sooner: the Sets, or Branches, scarce in the third or fourth yere, though in some places sooner. Didymus in Constantine teacheth an easie and a readie way of planting the Mulchset, which is, to take of a strong and ten yere Vine, the longest and fairest branch, that groweth lowest, a roote from the ground, and laying it long in a Trench of a foute depth, to cover it with earth the space of foute foote: and if the branch be so long, as it will serue for two burnings, you may make thereof two rootes. You must not suffer rootes to raine up upon one stay, but allow every roote his supporter.

The Branches, or Set that you meane to plant, you must cut from a very fruitfull and flourishing Vine, that hath borne ripe & perfect good fruit, full of ioynts, & not any way tainted, but whole & sound. Of such you must choose your Sets, & not of young Vines, that are weakes and feeble, but such as are in their chiefe state. Moreover you must gather your Set, not of the highest, nor the lowest, but from the middle of the Vine: the Set must be round, smooth, full of knots and ioynts, & many little bugges. All one as you haue cut it off, looke that you set it: for better doth it agree with the ground, and sooner grow. If you are driven to kepe them, burie them in the ground either whole, or loosely bound: and if the time be long that you meane to kepe them, you must lay them in emptie barrells, straining earth under them, and upon them, that the earth may lie round about them: and the barrell you must stop closely with clay, that there enter neither wind nor aire, so shall you preserve them sixe months in their growthe. Such as are ouer drie, you must lay them in water foure and fiftie houres, as for you set them, and you must set two Sets together, that though the one faile, the other may take: and if they both grow, you may take up the lesser of them: you must not make a medley of sundry sorts, specially white and black together: but as Columella saith, must sort them severally. You must be ware that the Sets haue not put out their springs, and that

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you set not a withered Set. Constantine would have the Set something crooked, affirming that it will the sooner take roote. You must lay about them three or foure stones, and then raise the earth, that it may equally with the dung be troden downe: for the stones keepeth the earth firme, & as I said before, coaleth the Roote. Both the ends of the Set you must annoint with Dee dung, for the killing of the wormes: as for the length, if it be full of ioynts, it may be the shorter, if it have few ioynts, you must make it the longer, and yet not excarding a fute in length, nor a shafman in shortnesse, the one for being burnt with ower drynesse in Summer: the other, least being set too deepe, it be with great hardnesse taken up, but this is for the leuell ground: for upon hills, where the earth still falleth, you may haue them a fute and a hand breadth in length. Florentine would not haue the trench lesse then foure fute in depth: so being set shallow, they sooner decay, both for the want of sustenance, and great heat of the Sunne, which is thought to pierce foure fute into the ground: though some there bee that thinke this fute sufficient for the plant. The Trenches for Vines, Virgill would not haue very deepe: but deeper a great deale for Trees. Such Vines as you mean shall runne upon trees, you must plant three cubits distant from the Tree: afterwards, when they be well growen, and need to be topped with the Tree (which you shall perceiue by his thicknes) you shall lay it downe in length, and bury it, till it come within a fute of the Tree, suffering the remaine to goe at libertie, nipping off all the buds with your nailes, except one or two, that it may the better prosper, which when it is growne up, you must toppe by little & little to the Tree, that it may rest upon it: which part of the Tree must be diligently pruned, and the spryngs and sciences that grow out of the roote, must according to Florentinus be cut cleane away. The trees, as much as may be, must be forced to the East and West, and both the Tree and the Vine, must haue the earth well digged, and minged about them. In rich ground, you may suffer the Trees to grow in height, but in barren ground they must bee pulled at seven or eight fute, least all the substance of the Earth be soaked by of the Tree. After your planting, you must digge the ground

The length  
of the sets.

every

every Month, and weede it, specially from the first of March, till the first of October: every thirtieth day you must digge about the young plants, and plucke up the weeds, specially the grasse, which except it be cleane pluckt up and cast away, though it be never so well covered, will spring againe, and so burne the plants, as they will make them both foule and withered: the oftener you digge them, the more good you doe them. When the Grape begins to alter, you must in hand with your third digging, and when it is ripe, before none when it is wareth hot, and after none when the heate decreaseth you must digge it, and raise the dust, which doing defendeth the Grape both from the Sunne and the Bile. According to Virgils minde, the Vine must be digged and weeded every Month: some would have them digged all the Summer long, after every deaw: others againe will not have them digged as long as they bud or burgen, for hurting the springs, saying, that it is enough to dig them thrice in the yeare, from the entering of the Sunne into Aries, till the rising of the seven Stars and the Dogge. Some againe would have it done from the Vintage before Winter, and from the Ides of Aprill before it take, and then againe before it flower, and likewise before the burning houres of the day. In some places when they have digged them, they doe not straight-wates cover them, but suffer the trenches to lye open all the Winter: in wet & raynise places they cover them sooner, closing up the roots with earth, and stopping all the passages of the water. Some make the trenches very deepe, & some not passing a fote deepe: and when they have done, they cover them aloft with Gre-dung, Shapen dung, or Hogs dung, or of other Cattell: Bidigians dung is the hottest, & such as causeth the Vine fastest to grow, but maketh the wo: let Vine. The dung must not be layd close to the Vine, but a little distant from it, where by the rootes that spread abroad may have some helpe of it, and the dung must not touch the raxes, for breaking of them: if there be no dung at hand, the stalkes of Beanes and other Pulse, will well serve the turne, which both defendeth the Vines from frost and colde, and keepes them likewise from noysome wormes: the kernels, and the stalkes of the Grapes, doe likewise supplie the want of dung: but

The ordering of Vines after their planting.

Of digging & danging

What dung is best for Vines.

Where the dung must be layde.



Pisse, the  
best dung.

The order  
of digging  
or stirring  
the ground.

the best of all, is old stale Urine. The plants of a yeere, or two yeere old, and so forth, till five yeeres, must be discretly digged, and dunged, according to their state: in sandy ground, the best dung is of sheepe and Goates: and in such sort you must digge the ground, that the earth that lyeth highest, be cast to the bottome, and that which was at the bottome, be layd aloft: so shall that that was dry, by the moisture within, be helped, and that which was moist and Rasse, by the heate above be loosened. You must also see that there be no holes nor pits in the Vineyard, but that it lie even. When you have thus digged it, and that the Vines have taken roote the first yeere, the rootes that grow about must be cut away with a sharpe knife: so the Vine, if it be suffered to roote every way, it hindereth the deepe downe growing of the roote. The Vines that are now of two yeeres growth, we must digge and trench about two foote deepe, & threescore broad, according to the rule of Socion. Of those Vines that climbe upon Trees, you must likewise cut off the spryngs that runne amongst the rootes of the Tree, lest the small rootes tangling with the greater, be strangled: and therefore you must leaue some little space betwixt the Vine and the Tree. After digging cansteth great fruitfullnesse: good heed must be taken, that the plants be not hurt in the digging: also it must be digged before his flourishing, or shaking out of his leaves: soe as immediately therewithall he beginneth to thrust out his fruit, so he that diggeth after the coming forth thereof, loseth much fruit with the violent shaking, and therefore must digge the timelier. Cutting and dressing of the rootes, you must begin in hand with at the Ides of October: so that they may be trimmed and dispatched also: Winter. After Winter digge about the rootes that you have dressed: and before the Summe enter the Aequinoctium, leuell the rootes that you have trimmed. After the Ides of April, raise up the earth about your Vine: in Summer let the ground be oftentimes harrowed. After the Ides of October (as I have said) before the colde come in, you must dress the rootes of your Vines, which labour layeth open the Summer spryngs, which the good husband cutteth away with his knife: so: if you suffer them to grow, the rootes that grow downe will perishe.

Dressing  
of Vines.

and





and if the cold of frost happen to come, it is spoken. Therefore in cold Countries, it were better to prunge it a little, then to cut it thoroughly, that is, to suffer the principall springs & branches to grow. Again, it is very necessary to cut them in the spring: the cuts must be made with a very sharpe knife: that they may be smooth, & that the water may not stand in them to the engendering of mould, & corrupting of the Wine: you must cut them round, so will the cut be sooner growen out againe: but Plinie would haue them slope-wise, for the better abhorring of the water. The branches that be broad, old, crooked, or woorthen, cut away, and set young and better in their place. You must make an end of your cutting with as much speed as you may: from the Ides of December, till the Ides of January, you must not touch your Vines with a knife: for Columella witnesseth, that Vines in winter may not be cut. In cutting remember well to cut it betwixt two joints, for if you cut it in the joint, you spill the life: the cut be alwayes downward, so shall it be safe both from sunne and frost. You must not cut them very early, but when the sun hath drunke up the frost, or the dew, & warmed the branch: the springs of the sets the first yeare, must be cut with good discretion, not suffered to grow too rank, nor cut so neare, but making the steepest to suffer a spring or two to grow out. Next unto cutting, followeth the propping, & supporting of the Vines: and it is best for the young & tender Vine not to be stayed up with any strong stay, but with some small thing of the sort, and while it is young, it must be patiently tied to the stay with small things of willow, straw, Ropes, Ropes, or Ropes, this latter binding is thought to be best, for the vines when they have ripe and pectre and hard the rinde.

Propping  
of Vines.

Gelding  
or plucking  
off of leaues.

The best stays for Vines as Plinie saith, are made of willow, Birch, Red Juniper, Cypress, & Silver. And in another place, he preferreth the Shepherd's staffe for this purpose above all the rest. The best for the Vine, is the Reed, which will endureth the winter. Gelding of the leaues, & cutting the Vine, is almost in one manner: the gelding of the leaues, & branches, must be done thus: as you, to the end that the superfluous springs & leaues may be plucked off. The first (as Plinie saith) must be done within ten daies after the Ides of May, before the Vine begin to flower.

for about the tenth of June, both the Wine & the M. beate, the two noble fruits, do colour. At the second time, the spinings are sundry, for some suppose it best to plucke off the leaves & branches as soone as it hath left colouring: others, when the suite is full ripe. The superfluous topings being young and tender, are to be taken away, that the Wine may be more at liberty, & through blown with the winde. This gelding, or cutting away the superfluous branches and leaves is as needfull as the propping: for both the fruit doth prosper the better, & the propping the more will be the handfomer, & the Wine will be the lesse full & galled: for that which is cut being graine tender, both the sooner & the sounder recover himselfe, & the Grape ripeth the better. Ten daies before the Wine begins to colour, for that you geld it in this sort: Cut off all the superfluous branches, both on the toppe, and on the sides, but meddle not where the clustres grow, strike off the tops of the branches for growing too ranke: such Grapes as grow towards the South, or the West, leave them their branches to defend them from the boate of the Sun: cut away most from the young Wine, for over-burdening him. After the heats of the Sunne beginneth to fade, away with the leaves, for hindring the Grapes of their riping: and while the Grape is a colouring, busie your selfe with digging about it. Such Vines, as with thicknes of their leaves corrupteth their fruit, are to be rid of their superfluous branches and leaves a month before the gathering of your Grapes, that the winde may blow the better through them: but the leaves that grow aloft in the very top, must not be medled with, but left as a defence, & shade against the heat of the Sun; but if so be, the end of Summer be given to much raine, and that the Grapes swell in greatnesse, then hardly plucke off the leaves from the top also.

**T H A N.** One thing I pray you, let me heare more the signes and tokens of the ripeness: for as I understand, we may not be too busie in gathering them too soone, nor els any lingering after they be ripe, without great harme.

**M A R I V S.** You say true: for being gathered before they be ripe, they will make but small Wine, and not durable. And againe, if you suffer them too long, you shall not onely hurt the

Wine with the overlong bearing of her burden, but also if dayle  
or frost happen to come, you put your Wine in great danger.  
Democritus writeth, that the Grape endureth in his ripenesse  
not above five dayes; therefore the iudgement of his ripenesse,  
is not all onely to be given upon the sight, but upon his taste;  
though Columella thinketh there can be no certaine iudgement  
given of the taste. But if the stones doe change their colour, and  
be no longer graine, but be almost blacke, it is a signe the  
Grape is ripe. Some againe do presse the Grape betwixt their  
fingers, and if they see the stone to slip out smooth, without any  
thing cleaving to it, they thinke them meete to be gathered; but  
if they come out with some part of the Grape cleaving to them,  
they count them not to be ripe. Others probe them in this sort:  
Out of a very thicke cluster they take a Grape, and as they be-  
hold the cluster well, wherein they see no change, they take it  
for a token of ripenesse. You must gather your Grapes, the  
Moone being in Cancer, Leo, Libra, Scorpius, Capricorne, or  
Aquari, and underneath the earth.

27

Thus much for the Wine in generall, now for particular ex-  
periments, as to have it taste more pleasant then the true  
nature of the Grape, and to smell in the mouth odoriferouslie  
as if it were perfumed, you shall doe it in this manner; Take  
Damaske Rose water and boyle therein the powder of Cloaves,  
Cinnamon, three graines of Amber, and one of Muske, and when  
it is come to be somewhat thicke, take a round Gudge and  
make an hole on the maine stocke of the Wine, full as deepe as  
the heart, and then put therein the Medicine, then stopping the  
hole with Cypresse or Juniper, lay graine ware thereupon and  
binde a linnen cloth about it, and the next Grapes which shall  
spring out of the Wine will taste as if they were perfumed.

If you will have Grapes without stones, take your plants  
and plant the small ends downeward. The Wine naturally  
of himselfe, doth not bring forth fruit till it have bene three  
yeeres planted: But if evening & morning for the first moneth  
you will bathe his roots with Goates milke or Cowe milke,  
it will beare fruit the first yeare of its planting.

You may if you please, grafted one Wine upon another, as the  
swate

make upon the wine; as the Spanish Grape, or Breche upon the North, or Burdeaux, the Spanish or Flane Grape on the Calcoyne, and the France upon any of all, and these com- positions are the best and bring forth the greatest and plea- santer Grapes.

Cures for  
the Vine.

If your Vine grow too rank and thicke of leaves, so that the sappe both wast it selfe in them, and you thereby lose the profit of the fruite, you shall then bare all the cootes of the Vine and cast away the earth, filling by the space againe with ashes and sand mingled together. But if the Vine be naturally of it selfe barren, then with a Conoye, you shall make one hole halfe way through the maine body of the Vine, and by the into the hole a round pebble stone, which although it grow steele in, yet it may not fill up the hole, but that the like humors of the Vine may passe the stone therat, thereby the roots with they earth and ore being mixed together, and once a day for a month water it with old urine, and it will make the Vine fruitful. If the Vine be troubled with wormes, Beewes, Ants, Caterpillars, or such like, you shall browne and enenning, to witte if you mix with Cowes urine and Vinegar mixed together, and it will helpe it.

**THAR.** Is there no way to make the Grape ripe the sooner?  
**MARIV.** Plinie teacheth, to rubbe over the Grapes with fast Vinegar, and very old Wine, and thus to be often digged, and covered.

**THRA.** What ought you to do for preserving of your Grapes when they be gathered?

**MARIV.** Some keepe them hanged up in the walls of chambers, and some in earthen pots, those covered with leaden vessels.

But if you desire (living in a colde country that is hardly capable of the wine) to have Grapes in their best and true kind, most early and longest lasting, you shall in the most convenient part of your Garden, which is near the point or middle point thereof, build a round house in the fashion of a round Doucote, but much lower; the ground within whereof shall be above the ground than at the Wyche thickness, upon this ground-plot you shall place a ground-till, and thereon the great strong

strong winds which may reach to the roofe; these winds shall be placed better then four square one from another, with little square houses of wood, such as you see in Glass windows, first betwixt every two houses, the walls you may make in what proportion you will; so this house may serve for a delicate Temperating house, and you may either cover it with Lead, Plate or Tyle, from the ground to the top between the houses you shall glasse it with very strong Glass made in an enormous large square pane, well leached and Cemented: This house thus made, you shall observe that though the Blackwork there be made betwixt the windows, the square holes cleane through into the house. When on the out side opposits against these holes you shall plant the steele of your Wine having beere very carefull in the seasoning and clearing thereof, which doome as you shall observe, so you shall haile it through these holes, and as you do so plant a Wine against a halle, so you shall plant this against the Glass window on the inside, and so soon as it shall begin to beare Grapes, you shall be sure to turne every thing so that it may be close to the glasse, that the reflection of the Sunne heating the glasse, that beere may hasten on the ripening and increate the growth of your Grapes, as also the house defending of all manner of euill weather, these Grapes shall hang ripe vntill as much as wither even till Christmas. This experiment hath bene approved in England and found most excellent \*.

THE 4. A way you maye with the other fruit Trees of your Orchard.

The Olive.

MARIV 1. Among other fruit trees next unto the Wine (as Columella saith) the chiefe place is giuen to the Olive, in Latine Olea. Of all other plants it requireth least trouble and charges, where as the Wine requireth most; and though it beare not every yeare, but every other yeare, yet is he to be borne withall, because he asketh neither cost nor labour: and if you bestow any upon him, he recompenseth it thoroughly, with the abundance of his fruit. And since there is so great profit and commoditie in this Tree, and that the uses of it are so many, and so needfull, it is good reason to be diligent and carefull about it; he loveth







as big as a mans arme, is best to be remoued: let it stand but a little above the ground, so shall it prosper the better. Before you remove it, marke the part that stand South with a peece of Wker, that you may set it in like maner againe. You must first dig the trenched ground with Hattocks, & after turne in soare, plowed earth, and sow it with Barley: if there be any water standing in them, you must let it out, and cast in a few small stones, and so striding your Hattocks, cast in a little dung: After the tenth of June, when the ground gapes with the heate of the Sun, you must take heed that the Sun pierce not through the clefts to the roote. From the entring of the Sun into Libra, you must ridde the rotes of all superfluous springs: and if the Tree grow upon the edge of a hill, you must with little gutters draw away the muddy water. The dung must be cast on at the fall of the leafe, that being mingled in Winter with the mould, it may keepe the rotes of the trees warme. The mother of Oyle must be pouzed upon the great ones, & the mosse must be cut off with an Iron Instrument, or else it will yield you no fruit. Also after certain yeeres, you must cut and loppe your Oliue trees: for it is an old proverbe, That who so ploweth his Oliue Garden, craveth fruit: who dungeth it, moweth fruit: who ruffeth the trees, forceth fruit. In the Oliue Tree you shall sometime have one branch more gallant then his fellows, which if you cut not away, you discourage all the rest. The Oliue is also grafted in the wilde Oliue, specially betwixt the rinde and the wood, and by implastring: others graffe it in the roote, and when it hath taken, they pull by a parcell of the roote withall, and remoue it as they doe other plants. Those Oliues that haue the thickest backs are grafted in the bark. The time of Grafting them, is from the entring of the Sunne into Aries, and with some from the xxij. of May, till the first of June. The time of gathering of Oliues, is when the greater part or halfe the fruit waxeth black, and in faire weather: the riper the Oliue is, the satter will be the Oyle. In gathering of Oliues, there is more cunning in making Oyle, then in making Wine: the lesser Oliues serue for Oyle, the greater for meate. There is simpysafts of Oyle made of an Oliue: the first of all is raw, & pleasantest in tast: the first streame that comen from the presse is best, & so in order.

TH A.

**T H R A.** Go on then, and let vs heare what you can say of Apple trees: whose use is moze commonly knowne unto vs.

**M A R I V S.** There are such sundry sorts of Apples, differing both in Shape and saour, as are scarcely to be numbred.

There be at this day that are chiefe in price, the Pippen, the Komet, the Pometoyall, the Parigold, with a great number of others that were too long too speake of.

Apple trees are set either in February, or in March, or if the Countrey be hot and dry, in October and November. But all kindes of Apples doe better prosper by grafting, & inoculation, or imbudding, as I said before, about March or Aprill, or what time so euer the sap be in the rinde. They are also grafted by implastring, about the tenth of June: though some (as they say) haue had good successe in doing it after the entrance of the Sun into Aries, as I haue said before, where I speake of implastring and Grafting. The Apple is commonly Grafted upon the Crab stocke, or upon the Bramble, being first planted, and the yere after cut off within a fote of the earth: upon this stocke you may Gasse (as I said) the tender young Graftes of any Apples. Palladius saith, you may gasse the Apple upon the Perrie, the Hawthorne, Plumb tree, Seruiss tree, Peach, Plane tree, Poplar, Willow, and Pear: but in such difference of Countreies, we can set downe no certaine order for them all: and therefore as farre as mine owne experience, and the knowledge that I haue learned of others will stretch, I will gladly shew you. There are that according to the olde order, doe gasse the Apple either upon a wilde Perrie, or upon a Quince, wherof they haue a most excellent fruite, called of the olde Writers Melimela. If you Gasse upon the Plane tree, you shall haue a red fruite: you may also well Gasse your Apple upon the Damson tree, and if you Gasse upon the Cytron, you shall haue them beare, as Diophanes saith, fruite almost all the yere long.

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But aboue all to graft the Apple upon the Apple is the best, for the best stocke ever bringeth forth the best fruite.

The Apple loueth a fat, and a good ground, well watered rather by nature, then by industrie. In mountaine Countreies they must alwayes be set toward the South: it prospereth well enough, so it be something holpen with the Sunne, neither doe they

they refuse either rough or marish grounds. A leane and a barren soyle bringeth out worm-eaten, and falling fruit: the noysome Wormes are destroyed with Hogges dung, mingled with mans urine, and polvred upon the rootes. And if the tree be very full of Wormes, being scraped downe with a brassen scraper, they never come againe, if the place whence you scraped them, be rubbed over with Bullocks dung: some adde unto urine Coates dung, and polvze upon the rootes the Lees of old wine. The tree that is sicke, or prospereth not, is holpen being watered with Asse dung, & water five dayes: they must be often watered at the setting of the Sunne, till the Spring be come out. Pliny writeth, that the water wherein Lupines hath bene sod polvred upon the tree, doth the fruit good. They say, if the tree be much watered with urine, the fruit will be red. Others againe set under their trees Rokes, thinking thereby to have their Apples red. Apple trees (as I said before) must be set every sort by themselves, as Columella biddeth, least the small trees be hurt of the great, because they be not all of one growth, or strength. Beside, you must set them very thin, that they may have room to shoot out their branches: for if you set them thick, they will never beare well, and therefore you must set them forty, or at the least thirty foot a sunder: The Apple declareth his ripenes by the blacknes of his kernels.

Against  
hurtfull  
wormes,

For their gathering, you shall understand that the Sommer fruit is first to be gathered, whose ripenes you may partly know by the change of the colour, partly by the pecking of Birds, but chiefly by the smell: when they are ripe you shall rather gather them with the hand then beate them downe with poles. There be some that goe up into the Tree, or have a tall ladder with a backe stay, that the ladder may not hurt the tender Branches, and having a Basket with a long line fastened thereunto, as soon as it is filled, let it downe to be emptied gently into the greater vessels: & in this gathering you shalbe not respect the state of the Moon or such like ceremonies. But when you come to gather your winter fruit which are Peppins, Pear-mains, Russettings, the black Annat & such like, you shall in any wise gather them in the wane of the Moon & in a dry season, & if it be so that your Roke be so great that you cannot gather  
all:

all in that season, yet you shall get so much of your principall fruite, the youngest, and sayest as is possible to be gotten, and persueve that for the last which you intend either to sell, or to spend. There be other which gather their Apples into a gathering Apron, and when it is filled, then they emptie it into their larger vessels; this gathering Apron is a strong piece of Canvasse at least an elle every way, which having the upper ende made fast about the mans necke, & the neather ende with three loopes, that is one at each Corner and one in the middle, through which you shall put a string and binde it about your waist, insomuch that both the sides of your Apron being open, you may put your fruite therein with which hand you please; Now you shall carefully observe in emptying your fruite from one vessel to another, that you doe it so gently as may be, least in poling them out too rudely the stalkes of the fruite doe prick one another, which although it doe appeare little or nothing at the first, yet it is the first ground and cause of Rottenesse, and therefore you shall to your uttermost power gather your Apples with as small stalks as may be so they have any at all, which they must needs have, because that as too big stalks do prick and bruise the fruite, so to have none at all makes the fruite rot first in the place where the stalk should be: you shall also keepe your Apples cleane from leaves, for they being greene and full of moisture, when by reason of their lying close together, they begin to wither, they strike such an heate into the Apples that they welldoe and rot instantly.

Offallings.

As touching your fallings which are those Apples which fall from your Trees, either through too much ripenesse or else through the violence of winde or tempests, you shall by no means mixe them with your gathered fruite, so they can by no means last or indure so long, for the latter which falleth by force of winde, wanting the true nourishment of the earth, & the kindly ripening upon the Tree, must necessarily shrink, wither, rot and come to naught, so that your best course is to spend them speedily; For the other which hath too much ripenesse, though it be much better then the other, yet it cannot be long lasting, both because it is in the falling bruised and also hath too much and too early ripenesse, which is the first step to rottenesse

so that they must likewise be spent with all expedition. They are kept in faire lofts, vaults, or cold places with windowes opening toward the North, which in faire weather must be set wide open: & therefore Varro would haue all Apple lofts haue their windowes North, that they may receiue the North aire: the South winds must be shut out: The blasts of the North wind, both make them wrinkle & rugged: they must be laid thin upon Straw, Chaffe, or Mats. I had an Apple brought me out of Holland, that endured thre yeares: I haue a tree of them here in this Orchard of his colour, called a Greening. You must lay euery sort by themselves, lest sundry sorts lying together, they sooner rot. Some use to lay them in But leaves, which both giveth them good colour, & good smell. They are also kept from rotting, if they be layd in Barley or Wheate. Palladius would haue them kept in earthen vessels close stopp'd, in Cisterns, or in Caves: Apuleius in Constantine, would haue euery Apple wrapped in But leaves, and so layd up: a great sort of wayes beside of keeping them, you shal read in diuers Authours. Some to auoide the hurt of the frost, use to cower them with wet Linnen cloth, which being frozen, the fruite that lyeth vnder it, is preserved. Your Apples must be so layd up as the stalkes stand downward: neither must you touch any, but such as you neede. Apples are hurtfull to bearing cattell, so as the sauer causeth them to tyze, as Lucian in his Asse witnesseth: the like is written of Peares: the remedy, they say, is to let them eate some of the fruite afore. Of Apples, with certayne pills for the purpose, they make a drinke called Cider, and a small drinke beside with water, and the residue of the Apples strained, is a good drinke to coole the thirst of the poore labourer.

For the making of Cider it is in this manner; after your fruite is gotten you shall take euery Apple by it selfe, and looking upon them, picke them cleane from all manner of filthynesse, as bunnings, Rottemesse, Worme eating and such like, neyther leaue vpon them any stalkes or the blacke Buds which grow on the top of the fruite, which done you shall put them into some very cleane vessell, or trough or (if you haue it) into the Cyder Mill, and either with Bettles or the Mill stone, crush or grynde the Apples as small as may bee, and then remove them

To keepe  
Apples.

them as they are bruised into other cleane vessels, till all your fruite be bruised. Then take a bag of hairecloth made at least a yard or there quarters square, and filling it full of the crust fruite, put it in a presse of wood made for the purpose and presse out all the iuyce and moisture, turning and tossing the bag untill therobe no more moisture to drop out; and so bagfull after bagfull cease not untill you have prest all, wherein you are especially to obserue that your vessels into which you straine your fruite be exceeding neate, swete & cleane, & let there be no place of ill savor or anoyance neare the, for the liquo: is most apt to take any infectiō; as soone as your liquour is prest forth & hath stood to settie about twelue houres or more, you shall then turne it up into sweet Hogheads, as those which have had in them last either white wine or Clarret, as for the Hacke vessel it is tolerable but not excellent, all others refuse; you may also if you please make a small long bag of fine linnen cloth, and filling it full of the powder of Cloves, Spice, Cinamon, Ginger and Ly-mon pills, hang it with a string at the bung-hole downe into the vessel and it will giue the Cyder an excellent flavor, and this being done, clay up the Bung-hole with clay and salt mixt together so close as is possible, then use it at pleasure.

The Pearre.

The Pearre, in Latine *Pirus*, challengeth the next place, and is one of the chiefest beauties of the Orchard. The Apple tree spreadeth in broad branches: the Pearre tree riseth in height, and delighteth in a rich and a moist ground: it both groweth of the Kernell, and of the Hippen, but is a great while before it come to good: and when it is growne, it degenerateth from his owne good Nature, and therefore it is better to take the wilde plants, and to set them in their ground in November, and when they bee well rooted, you may graffe upon them. It is said, that it so prospereth with often digging, and much moisture, as it neuer loseth his slowe. You shall doe great good unto it, if every other yere you bestow some dung upon it. Gre dung is thought to make great and massie Peares: Some put too a little Ashes to make their taste pleasanter. They are not alonely planted of the rootes, but also the very little twigs, being plucked from the roote, will grow. If you will set young plants, let them be three yere



yeres old, or at the least two yeres old before you set them.  
 Some againe take the sayest branches they finde upon the  
 Tree, and set them as they doe the Olive. The time of  
 Grafting the Peare, is March and Aprill: Pliny sayth, you  
 may well graffe it when the blossome is on it, which I  
 my selfe haue tryed to be true. It is grafted upon the Quince,  
 the Almond tree, the Pomegranate, the Apple, and the Pul-  
 berie tree: if you graffe upon the Pulberie, your Peare shall  
 be redde. Virgil teacheth to graffe it upon an Ashe, where-  
 as indeede it will agree with any stocke: the Graft must  
 be the growth of a yere, and afore it be grafted, cleared of all  
 leates and tender parts. And if you would haue the fruite  
 pleasant, and the tree fruitefull, you shall boare a hole through  
 the stocke close by the ground, and driving in an When or a  
 Wychen pin, cover it up with earth: if the tree prosper not,  
 wash the rootes, and water them with the ius of olde Wine  
 sifterne oales, so shall it beate the better and pleasanter fruite.  
 It shall neuer be hurt with wormes, if when ye plant it, you  
 doe annoint it with the Saule of an Ore: if the tree (whose rootes  
 haue bene cut) seeme not to prosper, Palladius his remedy is, to  
 pierce the roote thozow, and to dybe in a pin, made either of  
 Waxe or Plumtree. If your Peares be stonie, & choake Peares  
 dig up the earth from the rootes, cleanse them of stonies, and sift  
 in good new mold againe in the place: let your Peare trees stand  
 thirtie foote asunder, or little lesse: your Apple trees farther,  
 as I haue said.

Of Peares is made the drinks called Perrie, which in  
 taste doth resemble Rensh wine; and is made in all poputs as  
 you make Cyder.

For the gathering of Peares because it is a quainte fruite &  
 much concealeth the ripening, you shall obserne the colour of  
 your Peare from time to time, and if you doe see it alter either  
 in part or all, you shall be sure the fruite is neare ripening,  
 for Peares doe neuer chaunge their colours but when  
 they doe desire to bee taken from the tree: and of all fruite the  
 Peare may be gathered the hardest, because his owne naturall  
 heate and peculiar quality will ripen him best with lying;  
 yet to bee moze strongly fortified in the knowledge of the

The gather-  
 ing.

ripenesse of your fruite, and because it is better to get a day too late then an houre too soone, you shall befoze you gather your Peares, whether they be Sommer fruite or Winter fruite, or whether you meane to spend them soone or preserve them long, take one from the Tree, which is neither the ripest nor the greenest, but betwixt both, and cut it through the middle with your knife, not so giwise but overthwart; and then looke into the Coare where the kernes ly, & if it be hollow, so as the kernes lie as it were hollow therein; the neather ends thereof being turned either blacke or blackish, albeit the Compleation of the Peare be little or not at all altered, the Peares have their full groweth and may very well be gathered.

Now for their keeping (to blanch at all unnecessarie experiments) the best way is to lay them upon a Bed of Ferne, Straw or Chaffe one upon another in great thicknesse, and their owne naturall heat will in short space ripen them, which you shall perceiue both by the speedy changing of their colour, and the strength of their sinell, which will be exceeding suffocating; which as soone as you perceiue, you shall then spread them thinner and thinner untill they be all ripe, and then lay them one by one, in such sort as they may not touch one another, and then they will last much the longer; You shall also (after they bee ripe,) neither suffer them to have Straw nor Ferne under them, but lay them either upon some smooth Table, some Boards or fleaks of wands, and they will last the longer.

If you be to carie or transport Peares farre, you shall then gather them so much the sooner, and not suffer any ripe one to be amongst them; and then lying great wicker Baskets (such as will hold (at least) Quarters a peece) finely within with wheatestraw, fill them up with Peares, and then cover them with straw, and Cord them above, and you may either Transport them by land or Sea whether you please, for they will ripen in their cariage; But when you come to your place of Residence, then you must needs unpock them & spread them thinner, or else they will rot and consume in a fodaine.

Next in order, after Apples & Peares, commeth the Quince. The Quince  
 They are planted after the same manner that Peares and  
 Cherries are: some affirme, that the settes that have bene set  
 in March, or in February, have taken such roote, as they have  
 borne fruit the yere after. They grow well in cold and moyst  
 Countreies, in plaine and hilly grounds. In hot dry Countreies,  
 you must set them in October. Many set them with the tops and  
 the set, but neither of them both is very good: and being set of the  
 science, they some degenerate. They are better grafted in the  
 stocke then in the barked, and that in February or March. They  
 receive into their stocks, the Graftes (in a manner) of all man-  
 ner of trees, the Pomegranate, Bernisse, all the sorts of Apples,  
 and make the fruit the better. The Quince tree must be set in  
 that order, that in the shaking of the winds, they drop not one  
 upon the other. When it is young or newly planted, it is helped  
 with dung, or better with Ashes: they must be watered as often  
 as the season is very drye, and digged about continually: in hot  
 Countreies in October, or November: in cold Countreies, in  
 Februarie, or March: so: if you doe not often dig about them,  
 they will either be barraine, or beare naughtie fruit: they must  
 be propped, cut, and ridde of all encombrances. If the tree be  
 sicke, or prosper not well, the roote must be watered with the  
 mother of Dyle, mingled with the like quantitie of water, as  
 Dydimus in Constantine saith, or vnslackt Lime mingled with  
 chalke, or Rozen, and Tarre must be potized upon the cotes:  
 you shal gather them in a fayre day, being sound and unspotted,  
 and very ripe, and in in the wane of the Mone.

I will now shew you of the Medlar: The Med-  
lar. This Tree is also of the  
 number of Apple trees, and Pear trees: it is planted in like  
 manner as the Quince is: it delighteth in hot places, but well  
 watered, though it doe well enough in cold. We have seene  
 it prosper very well among Wkes, and Woods: so: we have  
 seene great Woods of them growing among Wkes, that have  
 yarely yielded a great deale of money. Some say, it is planted  
 of the science, in March or November, in a wel douned ground  
 and mellow, so that both the ends be rubbed over with dung. It  
 is also set of the stone, but then it is very long before it come to  
 any thing: it is excellently well grafted in the Bramble, the

Pittie, or the Apple. The Pedlars that you mean to keepe, must be gathered before they be ripe and being suffered to grow upon the Tree, they last a great part of the Winter: Next unto the  
*The Seruise* Pedlar, for neighbourhoo sake, we must speak of the Seruise, a high tree with a round berry, fashioned like an Egge. It delighteth in cold places, & if you plant it in hot Countries, it will ware harraine. It hath no prickles as the Pedlar hath, it groweth of the stone, the set, the rase, or the science, & prospereth in a cold & wet soyle upon hilles: It is planted in February & March in cold Countries, & hot, in October & November. It is grafted either upon his owne stocke, or on the Quince or Hawthorne, either in the stock or the barked. Next I place the Pomegranate.

This Tree only as the Fig & the Vine, the body being clouen, dieth not: the branches are full of prickles as the Coy: It is: it loveth both a hot ground, & a hot Countrie, and liketh not watry places. In some hot Countries, it groweth wilde in the bushes: it is planted in the Spring time, the rootes being watered with Hogs dung and scale. It is grafted upon his owne stocke, & also upon other trees, & likewise of the sciences that grow from the roots of the old tree. And though it may be planted sundry waies, yet the best way is the branches of a cubit in length, smothered with your knife at both the ends, & set slopewise in the ground, with both his endes well smeared with Hogges dung and scale.

The Cytron under which is comprehended foure seuerall fruits, as those which are yellow, or golden; the Orange; those which are of a greenish pale yellow, the Aurule, those which are long & fashioned like an Egge being yellow, the Cytron and if they be Greene, then Limon: the tree doth alwaies beare fruit, some ripe, & some springing: nature shewing in them a wonderfull fertilitie, as in the trees that Homer describeth in the Orchards of Alcinous The leafe is like the Bay leafe, saving that there grow prickles amongst the: the fruit is yellow, wrinkled without, sweet in savour, & sowre in tast: the kernels (as of a Pearce) a great resist of poisons. The tree is planted (as Palladius saith) foure manner of waies, of the kernell, the Science, the Branch, & the stocke. If you wil set the kernell, you must dig the earth two foot every way, and mingle it with Ashes: you must make short beds, that they may be watered with gutters on every side. In these

these beds you must open the earth with your hands a hand  
b. edth, & set thre kernels together, with the tops doo waerward, &  
being covered, water them euery day: & when they spring, leave  
no waides nere them: they will spring the sooner, if you water  
them with warme water: others say it is best the grains being  
taken out in the Spring, to set them diligently in good mellowed  
furrowes, & to water them ebery fourth or fift day: & when they  
begin to grow, to remoue them againe in the Spring, to a gen-  
tle and to a moist ground, for it delighteth in much wet: if you  
set the branch, you must not set it aboue a foot and a halfe in the  
ground, lest it rote. The science & the Locke, Palladius thinketh  
it better to be planted, & sheweth which way. If any man mean  
to cherish this tree, let him defend it wel from the North & set it  
to ward the South, & the sun, in the Winter, in frames & baskets:  
wherefore, some that are carefull & diligent in the tendering of  
this tree, do make little vaults toward the South, close covered:  
and within them, nere the wall, they plant the D'enge, suffering  
the vaults all Summer to lie open to the sun, & to haue the heat  
therof: and as sone as Winter comes, they cover them straight  
with straw, or mattes, specially with the stalks of gourds. This  
tree delighteth to be continually digged about: they are grafted  
in hot places in April, in cold Countreies in May, not under the  
bark, but cleaving to the stock hard by the rate: they may be  
grafted both on the Peare tree, & the Mulberry: but when they are  
grafted, must be fenced either with a wicker basket, or some  
earthen vessel. The fruit wil be sweet, if the kernels be steep'd  
in water sod with honey, or which is better, in Shapen milke.  
Such as you mean to keepe, must be gathered in the night, the  
Mone being doo wai, and gathered with branches and all, as they  
hang. Where the fruit kurdeth the tree you must pull them off  
& leaue but few on it, which wil be the pleasanter, & the kindlier  
fruit. It is at this day nourished both in Germanie & France, &  
is planted in vessels full of earth, & in hot weather is set abroad  
in the Sunne: in cold weather set in Cellars, or in hot houses. I  
haue seene in Germanie, certaine hot-houses, of purpose made  
of fircr boies, that in Winter haue warmed all the Garden,  
and in Summer the frames taken away, haue giuen place to  
the Sun. If while they be yong & little they be put into earthen

vessels,

178 The second Booke, entreating

The Mul-  
berry tree.

bestels, or glasse, they grow according to the proportion thereof: so that you may have them fashioned either like a man or like a beast, according to your fancie: but you must so order your moulds, as the aire may come to them. But lest I keepe you too long with these outlandish Trees, I will speak something of our owne trees, where with we are better acquainted. Among which we have the Mulberry. This is accounted of all other trees the wisest, because he neuer blossomeih til all cold weather be quite past: so that whensoever you see the Mulberry begin to spring you may be sure that Winter is at an end: he is ripe with the first, & buddeth out so hastily, as in one night with a noise he thrusteth out his leaues: they die the hands (as Pliny sayth) with the juice of the ripe berries, & wash it off with the Greene berries: he changeth his colour thus, first white, then red, and lastly blacke: he loueth hot places, and gravelly, and delights in digging & dunging, but not in watering: his rones must be opened about December, and the Lees of Wine poured upon them: it is best of the Stones, but thin: it often groweth to be wilde: the best planting is the science, and the tops, a foot and a halfe long, smooth at both endes, and rubbed ouer with dung. The place wherein you set your Sets, they cover with Ashes mingled with earth, but cover it not above foure fingers thicke. Palladius bids you to set it in March, and to remove it in October, or November. Deritius telleth, that the Mulberrie may be planted in the fall of the leafe, by thrusting into the ground the branches, after the order of the Fig tree, which I my selfe have proved, specially, if the end that is cut be well brused, that it may the quicker take roote: and so when you have made your hole with a stake, thrust it in: it is best grafted on the Beech, and the white Doplar, either by grafting in the stock, or by inoculation: so that the berries be white. It is grafted also in the Fig, & the Elme, which in old time they would not suffer, for feare of corruption. Of the Mulberry is made a very noble medicine for the stomacke, & so the goate they will longest indure (as it is said) kept in glasses. The leaues do serue to feede Silke-woymes withall, whereof some make a very great gaine, & set them rather so, that purpose then for the fruit.

The Cor-  
nell.

The Cornell tree, is thought neuer to exceed twelue cubits in height: the body is sound & thicke, like hawthorne: the leafe is like an almond

almond leafe, but fatter: the flowre & the fruit is like the Olive, with many berries hanging upon one stalk, firſt white, & after red: the juce of the ripe berries, is of a cloudy colour: it loveth both Mountaines & Vallies, & prospereth both in moſt ground and drye: it groweth both of the ſlip, and of the ſeede. You muſt beware you plant it not nere to your Bees, for the flowre doth kill as many of them as taſteth it.

This next Tree is called Ziziphus, the berries whereof, are like the Cornel berries, the flowre like the Olive flowre, but more ſweeter. Columella ſpeaketh of two kindes thereof, the one red, the other white: they are ſet of the ſtones, in hot Countries, in Aprill, and in cold places in May, or elſe in June: you may ſet both the ſtone, and the branch: it is very ſlow in growing: if you ſet the plant, you muſt doe it in March in ſoft ground: but if you ſet the ſtone, you muſt ſet them in a little trench of a hand broad, three ſtones together, with their points downeward. It loveth not too rich a ground, but rather a light ground, and a warme place. In Winter (as Palladius ſaith) it is good to lay ſtones about the body of the tree. The next are Italian Filberts, the leafe is narrow and browne: for upon the branches hang the Nuts, like the Nuts of the Pine. Of this tree it is thought there is both male and female, and therefore they grow commonly together, the male having underneath his ſhell, as it were, long ſtones: It is grafted about the firſt of Aprill, but upon his own ſtocke, and upon the Cerebinth, and the Almond Tree, they are alſo ſet (as Palladius witneſſes) in the fall of the leafe in October both of the ſlips, and the Nut. It delighteth in a hot and a moſt countrie, and loves in often watering.

Ziziphus.

Italian  
Filbert.

THRA. Becauſe I remember you tolde me beſore, that of Plants and Trees, ſome doe grow of the ſeed or fruit, and ſome are Grafted: and becauſe I have heard the Grafting of moſt of them, I would now ſaine heare you ſpeake of ſuch Trees as grow onely of the ſtone, or bertie.

MARTIN. Your remembrance is good: for though they commonly grow better when they be grafted, yet ſome there be that prosper the better being ſowen, and will ſcarce grow any other way. And though ſome of the ſoreſaid Trees being ſet, doe well prosper, as the Medlar, the Cornell, and divers other, yet ſometimes



sometimes they waie wilde, and are long befoze they come to perfection.

But by Graffing it is restozed againe: Some of them againe, howsoeuer they be soluen or set, do not degenerate or grow out of kinde, as the Bay, the Date, the Cypresse, the Peach, the Abzicot, the Damson, the Pistace, the Fir Tree, & the Cherrie; and because they be not all of one order, I will tell you seuerally of the chiefest of them. To plant Trees of the sæde, Nature (as I sayd befoze) taught men at the first: the sæde being deuoured of Birds, and with the dung let fall in the clefts of trees, where they after sprang and grew.

The Bay,

The Bay, in Latine Laurus, is a most gratefull Tree to the house, a porter to Emperours and Bishops, which chiefly garnisheth the house, and stands alwaies at the entrie. Cato maketh two kindes thereof, the Delphick and Cypresse: the Delphick, equally coloured and græner, with great berries, in colour betwixt græne and red; wherewith the Conquerours at Delphos were wont to be crowned. The Cypresse Bay hath a shorter leafe, and a darker græne, guttered (as it were) round about the edges, which some (as Plinie sayth) suppose to be a wilde kind: it groweth alwayes græne, and beareth berries, he sheweth out his branches from the side, and therefore wareth soone old and totten: it doth not very well alway with cold ground, being hot of nature: it is planted diuers wayes, the berries being dyed with the North winde, are gathered and layd abroad very thin, lest they cluster together, afterward being wet with Urine, they are set in furrowes a handfull deepe, and very nære together: in March they be also planted of the slip, and the science. If you set them of the slip, you must set them not passing nine foot a funder: but so they grow out of kind. Some thinke, that they may be grafted one in another, as also upon Seruissie and the Ashe: the berries are to be gathered about the beginning of December, and to be set in the beginning of March. But trees are commonly planted of the Nut, as all other shell fruits are. Of all Nuts, the Almond is counted to be the worthiest, they are set in February & prosper in a clære and hot ground, in a fat & a moist ground they will grow barren: they chiefly set such as are crooked, and the young plants: they are set both of the Slips, the

Nut trees  
The Al-  
mond tree

Note,

Roots, and the Bernell. The Ruts that you intend to set, must be laide a day before in soft dung: others scrape them in water, sod with honey, letting them lye therein but onely one night, least the sharpnesse of the honey speyle the Plant: and being thus ordered, Columella sayth, they will be both the pleasanter, and grow the better. The tops and the sharpe ends you must set downeward: for from thence commeth the roote, the edge must stand toward the South: you must set three of them in a Triangle, a handfull one from the other: they must be watered every ten dayes, till they grow to be great. It is also planted with the branches, taken from the midst of the tree. The Almond is grafted not nere to the top of the stocke, but about the midst, upon the bowes that grow out. This tree doth some beare fruit, and flowreth before all others, in January, or February. Virgill accounts it for a Prognosticatour of the plentifulnesse of Corne.

When thicke the Nut Tree flowres amide the wood,

That all the branches laden bend withall:

And that they prosper well and come to good,

That yeere be sure, of Corne shall plenty fall.

The bitter ones (which are the wholesomer) are made sweet, if round about the Tree, foure fingers from the roote, you make a little trench, by which he shall sweate out his bitterness: or else if you open the rootes, and powre thereon either Urine, or Hogs dung: or if at the roote of the Tree, you thrust in a fat wedge of Pitch Tree. By this meanes (as Basill sayth) they will lose their bitterness: but no Tree groweth sooner out of kinde, and therefore you must often remove it, or graffe when it is great.

Walnuts, they are set in the ground (as Plinie sayth) the same downeward, about the beginning of March: some think, that they will grow as the Filbert doth, either of the slip, or the roote: it groweth speedily, and liketh a drie and cold place better then a hot. The Nut that you meane to set, will grow the better, if you suffer it to lye foure or five dayes before in the water of a boy, and will prosper the more, if it be often remoued: those Ruts (as it is thought) prosper best, that are let fall by Crows, and other birds. If you pierce the Tree through with  
an

an Augur, and fill up the place againe with a pin of Elme, the tree shall lose his knottie hardnesse, neither will he lose his fruit, if you hang by either Pallet, or a piece of Sharlet from a dunghill: his shadow is great, and unwholesome. Hee sucketh out a great deale of good iuyce from the ground: for as you see, they are very mightie and high Trees, so as some of them are two or three sadome about: they occupie a great deale of roome with their standing, and beguile the other Trees of their sustenance: Besides, there are certaine trees they agree not well withall, and therefore have I set them on the outside of my Orchard, as standards to defend their fellowes from tempest and weather.

Haskell nuts,  
Filberts.

Among Nuts, is also to be recounted the Haskell Nuts, a kinde whereof is the Filbert, they are planted after the manner of the Almond: it delighteth in clay and watrish grounds, and upon Hills, being well able to abide the cold,

Chestnuts.

Among the Nuts also chalengeeth the Chestnut his place, though he be rather to be reckoned among Palle, whereby he is called the Nut or Palle of Iupiter, it loveth to grow on Mountaines, and in colde Countries: it hateth waters, and desireth a cleane, and good mould: it misliketh not a moist gravel ground, and loveth in a shadowie and northerly banck, it hateth a stiffe and a red clay ground: it is planted both of the Nut, and is set: it is better planting Woods of them, of the Nut, then of the set, otherwise the safer way were the set, which in two yeeres beareth fruit. It is planted when the Sunne is in the Equinoctiall, both of the science, the set, the branch, and the root, as the Olive is. The Chestnuts that you meane to sow, must be very saice and ripe, the newer they be the better they grow. You must not set them after that sort that you set Almonds, or Filberts, but with the sharpe ende upward, and a foot a sunder: the furrow must be a shaftman deepe. You were better (as I sayd) to make your Croue of the Nut, then of the sets, which will be mete to be selled for staves in seven yeere. Columella writeth, that the Chestnut, meet for the supporting of Mines, if hee be sowed in well digged ground, doth quickly spring, and being selled after five yeeres, it prospereth like the Willow: and being cut out in staves, it lasteth till the next selling,

selling, as shall be shewed hereafter, when we speak of *Walnuts*. They will also have the Chesnut to be grafted on the *Walnut*, the *Beech*, and the *Oake*: it hath bene sene, that where they grow two and two together, they prosper the better.

The *Pine* is planted not much unlike to the *Almond*, the *Pine* <sup>tree.</sup> kernels of the heite clockes being set as the *Almond* is: they are gathered in *July*, before the *Canicular* winde, and ere the *Aut*, the huske being broken, fall out. The best time of sowing them, *Palladius* reckoneth to be *October*, and *November*: this *Tree* is thought to be a curisher of all that is solwen vnder it.

The *Cherry tree* is easie to be planted, if the stones be but cast abroad, they will grow with great increase: such is their forwardnesse in growing, that the staves or supporters of *Vines*, being made of *Cherry trees*, are commonly sene to grow to be *Trees*. They are grafted upon the *Plome Tree*, upon his owne *stocke*, upon the *Plane Tree*, & on the *Bramble*, but best upon the wilde *Cherry*, it soegeth in being grafted, and beareth better fruite: if you graffe them upon the *Vine*, your *Tree* shall beare in the *Spring*: the time of grafting, is either when there is no *Gumme* upon them, or when the *Gumme* hath lest running. They remove the wilde plant, either in *October* or *November*, that the first of *January* or *February*, when it hath taken roote, it may be grafted upon. *Marshall* would haue your graffe it in the *stocke*: but indeed it prospereth better, being grafted betwixt the backe and the wood. It delighteth to be set in deepe trenches, to haue roome enough, and to be often digged about. It loneth to haue the withered bow continually cut away: it groweth best in colde places, and so hateth dung as if it be layd about them, they grow to be wilde: it is also planted of the slips, and will beare his fruite without stones: if in the setting of the set you turne the upper end downeward. Others will that the tree being young & two foot high, be slit downe to the roote, and the pith taken out of both sides, and ioyned together, the seames close bound about, and covered with dung: which within a yeere after, when it is well grown, the young graffes (which hitherto haue borne no fruite) if you graffe them, will beare *Cheries* without stones. There are sundry kinds of *Cheries*. Some redder then the rest; some coleblacke; some betwixt black and red, some greene; then the

The *Pine* <sup>tree.</sup>

The *Cherry* <sup>tree.</sup>



the Bay-cherry grafted on the Bay, the small Cherrie, and the wilde Cherrie \*.

The Plome  
tree.

The Plome tree is planted from the middle of Winter, till the Ides of February: but if you set the stones at the fall of the leafe, let it be done in November, in a good and mellow ground two handfuls deepe: they may be likewise set in February, but then they must be steept in ly three dayes, that they may sooner spring: they are also planted of the young sets that grow from the body of the tree, either in January, or in the beginning of February, the rootes being wel covered with dung: they prosper best in a rich and a moist ground, and in a colde Countrey: they are grafted toward the end of March, and better in the clouen stocke, then in the barke, or else in January, before the Gum begin to drop out: it is Grafted upon his owne stocke, the Peach and the Almond. There are sundry sorts of plomes, whereof the Damson is the principal, toying in a dry ground, & in a hot countrey, and is grafted as the other plomes are. There are diuers coloured plomes, white, black, purple, and red: diuers sorts of Plumbees, as the Emperiall, the Damascine, the Aerdocio, the Beate plumbe of all sorts, the pume Plumbe, the Pescod-plumbe, the wheate Plumbe, the Bay plumbe, the Horseplumbe, the Fingar plumbe, and many others \*.

The Peach  
tree.

Of the Peach tree, there are some kindes: but the chiefest are the Duracins, and the Abzitots: in November in hot Countries, and in others in January, the stones are to be set two foot asunder in well dressed ground, that when the young trees are sprung up, they may be remoued: but in the setting you must set the sharpe end downeward, and let them stand two or three fingers in the ground: where soeuer they grow, they reioyce most in watry grounds, which ground if you want, looke that you water them abundantly, so shall you have great store of fruit. Some would haue them set in hot countries, and sandy ground: whereby they say, their fruit will longer endure: the better will also the fruit be, if as soone as you haue eaten them, you set the stone, with some part of the fruit cleauiing to it: it is grafted either on himselfe, the Almond, or the plometree. The Apple of Armenia, or Abzicoe, doth far excell the Peach, used as a great dainty among Noblemen, and much desired of the sicke: they are best grafted

The Abri-  
coe.

grafted in the Plome, as the Peach in the Almond tree: the fairest gresses that grow next the body of the tree are to be chosen and grafted in January, or Februarie, in cold countries, and in November in hot: so if you take those that grow in the top, they will either not grow, or if they grow, not long endure. You shall inoculate, or imbud them in Aprill or May, the stocks being cut aloft, & many yong buds set in: neither must you suffer them to stand very farre one from the other, that they may the better defend themselves from the heat of the Sun. The French men, and our Gardners also, after the Italians order, do graffe the Abzicot, taking a graft (not full a finger long) or the bud that is well shot out, with a little of the rind cut off, and sitting the rind of a young Plome tree crossewise they set them in, binding them well about with Hempe, or Towre, & that in the ende of June, or in July, and August. Some thinke they will be red, if they be either grafted in the Plane tree, or haue Roses set underneath them: they wil also be figured, or written in, if seuen dayes after that you have set the stone, when it beginneth to open, you take out the Birnell, and with Vermilion, or any other colour you may counterfeite what you wil, if after the stone closed up about it, & covered with Clay, or Hogs dung, you set it in the ground. Again, you shall have them without stones, if you pierce the Tree thorow, and fill it up with a pin of Willow, or Cornel tree, the pith being had out: the Rotes of the tree must be cut & dressed in the fall of the lease, & douned with his own leaves: you shall also at this time pryne them, and ridde them of all rotten and dead bowes. If the Tree prosper not, polure upon the rates the Lees of old Wine mingled with water. Against the heate of the Summe, heape up the earth about them, water it in the evening, and shadow them as well as you may. Against the frosts, lay on dung enough. or the Lees of Wine medled with water, or water wherein Beanes have bene sodden: if it be hurt, with wormes, or such baggage, polure on it the Wine of Oren medled with a third part of Vinegar.

There is also grafted upon the Abzicot another Plumbe more excellent then it selfe, which is called the Pectarine, being lesse then the Abzicot, but far excellling in tast, yet in all other naturall qualities it differeth nothing from the Abzicot. Now



The Nectarine.

to

to preferne either this, the Abzicot, or any kinde of curious outlandish stone fruit, and to make them beare plentifully, be the Spring or beginning of Summer never so bitter, you shall after you have planted your Abzicot or other fruite in the face of the Sun rising, & plant him up and spread him against the wals of your Garden or house; upon the top of the wall and aboue the tops of the trees all along the wall, build a large pent-house of at least six or seven fote in depth, which ouer shadowing the trees, will (as experience hath found out) so defend them that they will euer beare in as plentifull manner as they have done any particular yere before. There be many that will scoffe, or at least giue no credit to this experiment, because it carrieth with it no more Curiositie, but I can assure you there is nothing more certaine, so I have seene in one of the greatest noblemens Gardens in this kingdome, where such a Penthouse was made, that so farre as the Penthouse went, so farre the Trees did prosper with all fruitfulnessse, and where the Penthouse ended, not one Tree bare; the Spring being most bitter & unreasonable. Now I haue seene others (whose purses may buy their pleasures) which haue in those Penthouses fixed diuers strong hooks of Iron, and then made a Canuase of the best Wole-darbie with strong looppes of small cord, which being hung upon the Iron hooks, haue reached from the Penthouse to the ground, and so laced with Cordes and small pullics, that like the Sayle of a Ship it might be trusted up and let downe at pleasure. This Canuase thus prepared, is all the Spring & latter end of Winter, to be let downe at the setting of the Sunne, and to be drawn up at the rising of the Sunne, and both reason and experience findeth it to be most profitable.

The Date  
tree.

The Date tree groweth in a mild gravelly ground, and delighteth in a watry soyle: and though it desires to haue water all the yere long, yet in a dry yere it beares the better: therefore some thinke that dung is hurtfull unto it.

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Now for the gathering and preserving of all manner of stone fruits, you shall with such a ladder as I formerly spoke of for the Apple, gather such fruite as you finde ripe by their colour, not taking the fruite from the stalk, but nipping the stalk and the fruit from the Tree, and you shall handle the fruite as little



as you can; If any of the fruite hang out of your reach, then you shall have a fine gathering hooke and with it draw the branches gentlie unto you, and disburthen them into a round Basket made with a Wyre bottome, having an handle twarte the toppe, to which a small hooke being fastned, you shall with that hooke hang the Basket, by you on some convenient Bough, and as you fill this Basket so you shall discharge it into greater Baskets made also with Wyre bottomes, & under them crosse Lathes or Splinters at least three fingers broad to defend the bottome from breaking; but if you be to carry your fruit far, as from Countrey to Countrey, or Market to Market, then you shall packe them into Hampers or Banniers made with false bottomes like Wyres, and lyned on each side and the top with greene ferne. Thus much for the generall gathering of the ordinarie Stone-fruite; Now for the gathering of the Peach, the Apricot, the Peach of all kindes, the Dateplumbe and indeede any curious grafted Plumbe, you shall duely consider when they are perfectly ripe, which you shall not Judge by their dropping from the Tree, which is a signe of over much ripenesse, tending to rottenesse, but by the true mixture of their colour and perfect change from their first Completion; for when you shall perceiue, that there is no Greenesse nor hardnesse in their out-sides, no not so much as at the setting on of the stalks, you may then Judge that they are ready to be gathered, and for a perfecter triall thereof you may (if you please) take one which you thinke ripest from the Tree and opening it, if you see the Stone comes cleane and drie away, and not any of the inside of the fruite cleaving unto it, then you may assure your selfe that the fruit is ready to be gathered, which you shall with great diligence and care gather, not by any means laying one Plumbe upon another, but each severally by another, for these tender plumbs are naturally so apt to receive hurt, that the least touch (though of themselves) both bruise them and occasion rottennes; Now when you have gathered them, if either you have desire to send them any journey, as in gratulation to your friends or for other private Commodities, you shall take some clothe, smooth, Wore, answerable to the stoze of fruite you are to spend; and first lyne it within

within all ower with white paper, then lay you plumbs one by one all ouer the bottome of the Bore, then conuering them all ouer with white paper, lay as many more upon the top of them, and cober them likewise with paper, & so lay Row upon Row, with papers betwixen them, until the Bore be sufficiently filled, & then closing it up, send it whither you please, & they will take the least hurt, whereas if you should line the Bore either with Hay or Straw, the very Skyns are so tender that the straw would print into them & bruse them exceedingly; and to lay any other soft thing about them, as Wool, Bumbast, Chaffe, Bran or the like, is worst of all, so they beate the fruit & make them sweate, through which they both lose their colour & rot speedily.

Of hard  
Plumbes  
and hastie  
rypening.

As touching the gathering of plumbes when they are harde and so rypen them afterwards, by laying them upon nettels, to which consenteth the most of the London Fruiterers, yet I am utterly against the Opinion, because I both know nature to be the perfectest work-mistress, & where she is abridged of her power there euer to follow disorders & imperfections, as also that when such things are done, as it were through an ouer hastie constraint, there cannot proceed any thing but abjectiuenes and a wastfull cellish, from whence I thinke it comes to passe that in London a man shal very seldom taste a delicate or well relisht plumbe, vntill it be from such as haueing fauite of their owne, make no continuallitie thereof more then their one pleasures; yet thus much I would perswade euerie one, that if they haue more ripe fruit then they can use or spend them, that then after they are gathered to spread them thinly upon nettels or vine-tree leaues, and if will preserve them sound and well coloured. But if your store be so superabundant that in no reasonable time you can spend them, then what you do not preserve or make Good-makke or Marmalade of, the rest you shall take, and sprinkling them ouer with sweet wood, lay them one by one (yet so as they may not touch one another) upon Wardes or Strakes made of wands, and put them into an Oven after Meade or Pres hath bene waluene out, and so leaueley drye them, and they will not onely last but taste pleasantly all the yeere after; and in this sort you may use all kinds of plumbes or Peares whatsoeuer; but I keep you too long in the describing of my Orchard.

T H R A.

\* **T H R A.** And no, I rather ( whilest I heare you ) imagine my selfe to be amongst them, planting and blessing of their fruits; but now remaineth that in stead of a conclusion to your talke, you declare the order of preserving them, to that end specially, that those things that are appointed for remedy (being not hurt, or in time administered, be not rather a hurt ) then a helpe.

**M A R I V S.** Your motion is good: first therefore, and generally, dunging and watering is needful for fruit Trees, a very few excepted: and herein heede must be taken, that you doe it not in the heate of the Sunne, & that it be neither too new, nor too old: neither must it be laide close to the foot of the Tree, but a little distance off, that the fatnesse of the dung may be drunk in of the roots. Pigeons dung, and Hogges dung doe also heale the hurts or wounds of Trees. The water wherewith we water them, must not be fountaine water, or well water, if other may be had, but draine from some muddie Lake, or standing Pools. Moreover, you must take heede as I also told you before ( when we began to talke of planting of an Orchard ) that your Trees stand a good distance a sunder, that when they are growne up, they may have room enough to spread, & that the small and tender be not hurt of the greater, neither by shadow, nor dropping. Some would have Pomegranate Trees, and Myrtels, and Bayes, set so thicke together as may be, not passing nine foot a sunder: and likewise Cherry trees, Plum trees, Quinces, Apple trees, & Pearre trees, thirtie foot and more a sunder: every sort must stand by themselves, that (as I said) the weaker be not hurt of the greater. The nature of the Soyle, is herein most to be regarded: so the Hill requirerth to have them stand nere together, in windy places you must set them the thicker. The Olive (as Cato saith) would have five & twenty foot distance at the least. You must set your plants in such sort as the tops be not hurt, or bruised, nor the bark, or rinde shaven off: so the bark being taken away round about, killeth any kinde of Tree. You must also have a regard of the shadow, what trees helpeth, and what trees it hurteth. The Walnut tree, the Vine tree, the Pyrch tree, and the Firre tree, whatsoever they shadow, they poison. The shadow of the Walnut tree, and the Oaks is hurtfull to

Shadow of  
of Trees.

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mens heads, & to all things that is planted nere it. The Pine tree with his shadow likewise destroyeth young plants, but they both resist the wind, & therefore good to enclose Vineyards. The Cypresse, his shadow is very smal, and spreadeth not farre. The shadow of the Figge tree is gentle, though it spread farre, & therefore it may safely enough grow amongst Vines. The Elm tree, his shadow is also mild, nourishing whatsoeuer it covereth. The Plane tree though it be thicke and grosse, is pleasant. The Poplar hath none, by the reason of the wabering of his leaues. The Alder tree hath a thicke shadow, but nourishing to his neighbours. The Vines is sufficient for himselfe, & the moving of his leafe, and often shaking, tempereth the heate of the Sun, and in great raine well covereth it self. The shadow of all those is commonly milde and gentle that haue long stalkes: the dropping of all trees is naught, but wast of all those, whose branches grow so as the water cannot readily passe through: for the drops of the Pine, the Oake, and the Hawthorne, are most hurtfull, in whose company you may also take the Walnut: the Cypresse (as Pliny saith) hurteth not. Proyner, proyning and cutting, is very good & necessary for trees, whereby the dead & withered boughes are cut away, and the vnpromitable branches taken off: but to proyne them ebery yere is naught, though the Olive requirith cutting ebery yere: & ebery other yere, the Myrtill, the Pomegranate, and the Olive, whereby they will the sooner beare fruit: the others must bee the seldomer proyned. Olive trees must be proyned in the fall of the leafe, after the setting of the seven starres: and first, they must be well runged, as a helpe against their hurts. You must cut away all the old rotten branches that grow in the middell, and such as grow thicke, and are tangled together, and all the water boughes, and vnpromitable branches about them: the olde ones are to be cut close to the stocke, from whence the new springs will arise. Scarifying also or lancing, is very wholesome for the trees, when they are screened with their leaues, & dyntelle of their barkes: at which time we use to lance the bark with a sharpe knife, cutting it straight downe in many places: which, what good it doth, appeareth by the opening and gaping of the rinde, which is straightwaies filled up with the body underneth. You must also trimme  
and

Dropping  
of Trees.

Proyning.

Scarifying.

and dycke the rootes of your Trees after this sort: You must open the ground round about them, that they may be comforted with the warmth of the Sunne, and the raine, cutting away all the rootes that runne upward. The trees that you remove, must be marked which way they stood at the first.

Also you must consider well the nature of the Soyle, that you remove out of a drye ground, into a moyst, and from a barraine hill, to a moist plaine, and rather satte, then otherwise. The young plants being thus removed, must in the second or third yere be pruned, leaving still about three or foure branches untouched so shall they the better grow: thus must you usually doe every other yere.

The old tree wee remove with the toppes cut off, & the rootes unperished, which must be helped with often dunging and watering. Apple-trees that blossome and beare no fruit, or if it beare, they sodainly fall away, you shall remedie by litting of the roote, and thrusting in of a stone, or a wooden wedge. Also if you water your Trees with Wine that is olde, it greatly anaileth (as they say) both for the fruitfulness, & pleasantness of the fruit. If the Tree decay by reason of the great heat of the Sunne, you must raise the earth about it, and water the rootes every night, setting up some defence against the Sunne. To cause their fruit to be quickly ripe, you must wet the little rootes with Vinegar, and Wine that is olde, cove ring them againe with earth, and oft digging about them. The Wine of men, if it be kept three or foure moneths, doth wonderfull much good to plants, which if you use about Vines, or Apple-trees, it doth not onely bring great encrease, but also giveth an excellent tast and favour, both to the fruit and the wine: you may also use the mother of oyle, such as is without salt, to the same purpose, which both must speedily be used in Winter.

Against frosts and mists, you must lay up round about your Orchard, little Faggots made of stalkes, rotten bowes, or straw, which when then the frosts, or mists arise, may be kindled, the smoke whereof auoydeth the danger. You must haue also drye dung amongst your Vines, which when the frost is great, you may set a fire: the smoke whereof disperseth the frost.

When the tree hath any sickness, they use to powze upon the routes the Lees of Wine mingled with water, & to sow Lupines round about them. The water also wherein Lupines have been sown, powzed round about, is very good (as Plinie saith) for Apples-trees. But perhaps I trouble you with this tedious, or long discourse of Herbs, Plants, & Trees, and therefore though there be much more to be spoken of, least I should seeme to over-wearie you, I will make an end of the Orchard and onely speake a word or two of other Woods; Now\*

Of Woods,

As touching Woods, Ancus Martius (as Petrus Crinitus writeth) was the first in Rome that ever dealt in them: the old Father had alwaies a speciall regard of Woods, wherefore Virgil saith:

If that of Woods I frame my Song,  
Woods vnto Princes doe belong;  
If that of Woods I list to sing,  
Woods may full well beseme a King.

It was ordained by the Romanes, that the Consuls should have the charge of the Woods, that there should no Timber be wanting for building of Houses, and Ships, & other Tymber-works, both publique, & private. The State of Venice at this day, obserueth the same order, appointing a private Officer for their Woods, who hath in charge as well to see to the p̄sently planting of them, as to let that there be wanting no Tymber, for their necessarie uses. The Wood that you see is of Oakes, Beeches, & other Hard trees: some part seruing for Tymber, and other for fuel. Of these therefore will I first begin to speake, & then of Olive Groves, and Willowes.

Planting of woods.

Now for the generall planting of Woods it was a custome amongst the Ancient, that when they found any hard & barren earth such as was unapt for Grass, or at least such as bare but grasse that would keepe life not comfort life, they presently plowed it up & sowed thereon Akorns, Ashkeyes, Haple knots Beech-apples, Hawes, Blowes, Nuts, Fulleys & all other seeds of trees in innumerable quantity: then this there is no better, no more easy nor more safer way of plantation, alwaies provided the soyle lie drie, no matter how mountainous, for low Barthes, vallies, and such as are subiect to Inundations seldome, nourish wood well: after

after your seede is layd safe in the earth, then be sure to fence it safely about either with hedge, ditch, pale or the like which may keepe out all manner of foulesoted beasts, for comming within the same for at least the space of ten yeares, after which time it will defend it selfe; that which is Wounded or Bitten before, will never prosper or spring to any goodnes. Now as the Sandy & Gravelly earth (which is usually the most Barren) will beare wood, so will also the clay ground, and it is found by experience that one Oake growing upon the clay ground, is worth any five which grow upon the Sand, for it is more hard, more tough & of much longer durance, not so apt to teare, rype or consume either with Lyme, Rubbish or any Casual moisture; whence it comes that ever your Shipwrights, or Millwrights desire the Clay Oake for their use, and the Joyner the Sand Oake for smoothnes and staynescot. Now

Amongst the Past Trees, and such as serve for Tymber, The Oake.  
the first place of right belongeth to the Oake: he that will then plant an Oake Grove, must provide him of the ripe Acornes, not over-ryed, nor faultie, or any way corrupted: these must he sow in good ground well filled, with as great carefulnesse as he plants his Orchard, and well enclose it, that there come no Cattell in it: which (when they be something growne) you must about February remove to the place where you intend to plant your Wood: if you cut and proyne them, it is thought they will prosper the better for Past: but if you reserve them for Timber, you must not touch the tops, that it may runne up the straighter and higher. In removing them, you must make your trenches a fote and a halfe deepe, covering the Rotes well with earth, taking good hede you neither burne them, nor breake them: for better you were to cut them: The Oake agreeth well enough with all manner of ground, it groweth almost in all grounds, yea even in gravel and sand, it liketh most a fat ground, neither refuseth it the Mountaine. We have at this day an Oake in Westphalia, not farre from the Castle of Alenon, which is from the fote to the nextest bow, one hundred and thirty fote, and thre elles in thicknesse: and another in another place, that being cut out, made a hundred Main, loades: not farre from this place there grew another Oake of



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ten yards in thickness, but not very high: the Robbers in Germanie, were wont to use so; their Ships hollowed Trees, whereof some one (as Pliny saith) would carrie thirtie men. The next amongst the Past trees is Beech, planted almost after the same manner that the Oakes be. The Pastholme it groweth high, if it have a ground made so: it prospereth upon hills, & likes not the plaine: it beareth Acornes lesser then the Acornes of the Oake, a leafe like a Bay, and is continually greene. The like hath the Cocke-tree, which is counted amongst those that beare Past, the barke whereof we occupie for the stokes of our fishing Nets, & Pantofels for winter: all other trees (saying onely the Cocke) if you spoyle them of their barke do dye. Another Past bearing Oke there is, called in Latin *Quercus siluestrum*, a kinde wherof some thinke the Cerre tree to be, called in Latine *Cerrus*, growing in wilde and barren places. There are some that doe number the Chestnut tree amongst the Past bearers: but of this I have spoken before. The best Past is the Oke Past, the next the Beech and the Chestnut, then the wilde Oke, &c. All very good and meet for the fattening of Cattell, specially Hogges. The Oke Past, or Acorne, maketh thicke Bacon, sound flesh, and long lasting, if it be well salted & dried: on the other side, Chestnuts and Beech Past: make sweet and delicate flesh, light of digestion, but not so long lasting. The next is the Cerre Tree, that maketh very sound and good flesh: The Pastholme maketh pleasant Bacon, faire and weightie. Pliny saith, that it was ordained by the Law of the twelue Tables, that it should be lawfull for any man to gather his owne Past, falling upon the ground of his neighbour, which the Cuias of the chiefe Justice hath thus interprets: that it shall be lawfull for him to doe it thre dayes together, with this proviso, that he shall onely gather the Acornes, and doe no harme to his neighbour, as Vipianus witnesseth. And thus of such Trees as beare Past. Now will I ioyn withall the principallest of the other Trees, to make up your Woodes, amongst which are the Elme, and the Willow: the Elme, in the planting whereof, because it is to great use, and easily growes, we may not let passe: first, because it groweth well with the Elme, & ministereth good foods to Cattle: secondly (as it is all heart)

Beech  
wood.

Mast.

The Elme,

heart) it maketh good tyber. Theophrastus and Plinie, doe both affirme the Elme to be barraine, peraduenture because the seede at first, comming of the leafe, lieth among the leaves, and therefore it is thought to be some of the leafe (as Columella affirmeth.) He that will plant a Grobe of Elmes, must gather the seed called Samara, about the beginning of March, when it beginneth to ware yellow, and after that it hath dried in the shadow two daies, sow it very thicke, and cast fine sifted mould upon it, and if there come not good store of rains, water it well: after a yere you may remove it to your Elme Grobe, setting them certaine fote a sinder, & to the end that they rote not too deepe, but may be taken up againe, there must be betwixt them certaine little trenches, a fote and a halfe distance: and on the roote you must knit a knot, as if they be very long, twill them like a Garland, and being well pointed with Bullockes dung, set them, and tread in the earth round about them. The female Elmes are better to be planted in Autumne, because they have no seede: at this day in many places, cutting off Setts from the fairest Elmes, they set them in trenches, from whence when they are a little growne, they gather like Setts, and by this dealing make a great gaine of them. This Timber of all others is excellent for water works, for lying buried in the earth, for Brelltries, Boies, planks and other uses. In the like sort are planted Grobes of Ashes. The Ash delighteth in rich and moist ground, and in plaine Countries, though it grow well enough also in dry grounds, he spreadeth out his rotes very far, and therefore is not to be set about coigne ground, it may be selled every third or fourth yere, for to make staves for Vines. The Ash groweth very fast, and such as are soylowes are set in February, with such young plants as come of them, in good handsome order standing a row: others set such Ashes as they meane shall make supporters for Garden Vines, in trenches of a yere old, about the Calends of March: and before the thirty fifth moneth they touch them not with any knife, for the preserving of the branches: after every other yere it is pruned, and in the first yere lopped with the Vine: if you use to cut away the branches they will grow to a very goodly height, with a round body, smooth, plaine, and strong: Plinie saith of

Ash ground.

experience, that the Serpent doth so abhorre the Ashe, that if you enclose fire and him with the branches, he will rather run into the fire then goe through the bowes. When you intend to plant Ashes for a speedie profit, you shall not according to the olde custome chuse the smooth, small, long plants, which hardly are three inches in compasse, and have put out hardly any branches, and are such as grow from the rootes of Older Ashes cut downe before, which our auncient Woodwards have used to slip; cleane from those Rootes; no, these are the worst sort of Plants: But you shall take the true ground Ashe which springth from his own proper Rote, being smooth even sound and streight, without bruise, Canker or other impediment; This you shall digge up by the Rote; being twentie inches in compasse, and having cleafed the Rote you shall leaue each spray not above halfe a foote or eight inches in length; but for the small thyddes or Tassels of the Rote, those you shall cut cleane away close by the woode, and so plant it in every poynnt as was shewed you for the planting of the Elme, onely the toppe thereof you shall by no meanes cut off, because it is a Tree of pyth, which to deuide or lay bare were very dangerous. And the best season for the planting of this Tree is ever in the increase of the Moone at the fall of the leafe, which is from the beginning of October till mydde November, and at no other time, for it would ever have a whole Winter to fasten his Rote and to gather strength that it may budde forth his leafe in the Summer following.

The Byrch,

Byrch, as Theophrastus writeth in his fourth Booke, is a Tree very meete for Woods: it prospereth in colde Countries, frostie, snowie and gravelly, and in any baraine ground, wherefoze they use in baraine grounds, that serue for no other purpose to plant Byrch. Pine Woods, Firre Woods, Pitch tree, and Larch, are common in Italy about Trent. The Pine tree, is planted of his kernels, from October to Januarie, in hot and dry Countries: and in colde and wet places, in Februarie or March: the kernels must be gathered in June, before the clogges doe open, and where you list to sow them, either upon hills or else where, you must first plow

The Pine.

plow the ground and cast in your sēde, as you doe in sowing of  
 Cozne, and cover them gently with a light Harrow: or a Rake,  
 not covering them above a hand broad: you shall doe well, if  
 you lay the kernels in water three dayes before. The Firre <sup>Firre tree.</sup>  
 tree, loveth not to have any great adoe made about it: if you  
 be too curious in planting of it, it will grow (as they say) the  
 worse, it growes of his owne kernell in wilde Mountaines,  
 Plaines, or any where. The Pitch tree, is a tree of the kind of <sup>The pitch</sup>  
 Pines, and very like to the Pine sweating out his Rozen as <sup>tree.</sup>  
 he doth: for there are five kinds of these Rozen trees, the Pine,  
 the Pitch tree, the wilde Pine, the Firre, the Larch, & the Tarre  
 tree, the planting of them all is alike. The Alder, a tree also <sup>The Alder</sup>  
 meete for Woods, it groweth in plaine and marish places nere  
 to Rivers. Theophrastus saith, it yieldeth a fruitfull sēde in  
 the end of Summer: many places are commodiously planted  
 with Poplar, whereof there are two sorts, the White and <sup>Poplar,</sup>  
 Blacke; the White is planted of the Branches and Setts, and <sup>white and</sup>  
 delighteth in watric places, or any other ground, it groweth very <sup>blacke;</sup>  
 fast: the blacke hath the ruggedder barke, his leaves round  
 while he is young, and corneted in his age, white underneath,  
 and greene above. The Tymber hereof is good for buildings,  
 specially within dozes: his wood is whitish within, and the  
 rinde blackish, whence he hath his name.

Though Homer call the Willow a fruitlesse tree, because his <sup>The Wil-</sup>  
 fruite turneth into cobwebs before they be ripe: yet is the so- <sup>low.</sup>  
 beraignty given him amongst Woods that are usually sold.  
 Cato giveth the third place of husbandry grounds to the Wil-  
 low, preferring it either before the Olive Grove, Cozne ground  
 or Hedgeway, for it is oftner to be cut, and groweth the thicker:  
 neyther is there so great gaine with so little charge in any  
 thing. It delighteth in watric grounds, darke and shadowie,  
 and therefore is planted about Rivers and Lakes, howbeit it  
 groweth in Champion, and other ground. It is planted of  
 young Settes, foure scote and a halfe long, and well covered  
 with earth: a wet ground requirerh a greater distance be-  
 twixt them, wherein you shall doe well to set them five scote  
 a sunder, in order like the Cinke upon a Dye: in the drie  
 ground they may be sette thicker together, yet Columella  
 would

Ohar.

The plant-  
ing of the  
Willow

Ordering  
of the Will-  
ow.

would have them the soote distant, so; passing by them. There are two sorts of Willowes, one sort enduring for ever, called *Slar*, serving for making of Baskets, Chayres, Hamper, and other Country stuffe: the other kinde growing with great and high branches, serving for staves to Wines, or for Quicksets, or stakes of Hedges, and is called *Stake Willow*. Also they serve for fence, so; fewell, to make harrowes, Cartfaddles and horse-shames: now for the setting or planting of the Willow you are first to respect the place which would ever be low and moist, the water sometimes washing them, sometimes Cooling them, and ever giving them comfort, it would be planted upon Banks where it may stand more drye then wet; for such prosper best and endure longest, as twelve, fiftene, nay one and twentie yeares: whereas those which are set close by the water, will hardly endure seven, but not above nine at the most. Touching their planting they be set two manner of wayes, but which is the best is not yet agreed on amongst husbandmen. The first is to take a great Augure, full as large in compasse (though much shorter) as that where with you Boare Pumpes, and with it boare an hole in the earth, two foote and an halfe deepe, then having headed some of the choycest Willowes, take the fairest and straightest of those lops, and then cutting them floapwise at both ends, leaving no superfluous twigs about them, put the bigger end downe very hard into the earth, and then with mouth that came forth, ramme the earth close and hard about the Set, so as no reasonable strength may shake it; Now theretothers which in stead of an Augure take only an Daken or Ashen Stake of the bignesse of an usuall Set, and with a Batell drive it into the ground two foote and a halfe, and then by shaking and opening the earth pull it out againe, then put in the Set as before shewed, and beate and tread the earth close thereunto, and there is no doubt of the well prospering thereof; this labour may be doone either Spring or fall, and one good workeman may set 200 Sets in one day. Now for the ordering and government of the Willow after their planting, you shall after every flood see if the Water have driven any of them away, & immediately mend them. If any Cattle shall pill or Barke them, you shall pull up such Sets, and place new in their Moone; you may hear

o; loppe your Willowes once in thre yeres o; fise at the utmost, and when you see the Bodys waxe hollow you may digge them up for the fire, and fire new Setts in their places.

The Osar commonly groweth of his owne selfe, and is also planted of his Roddes, in watrie and marish grounds, the earth raised up, and layd in furrowes: it is planted, and springs most plentifully, where the earth is beaten up with the rage and over-flowings of the water: it serueth as a sure defence for making of Bankes and Walles in Parthes, and that chiefly in Parth, the Spone encreasing: the Osar may be cut every yere, o; every two yere if you will.

For planting of Osars.

Now I will procede with Coppisse Woods, that are continually to be sold.

This Coppisse, o; sale Woods, were first brought up (as Plinie saith) by Qu. Martius. This kinde of Wood groweth commonly of his owne accord in Forrests, and watrie places: but all Woods are not for this purpose, for some Trees there are which if you cut and poule often, will fade and dye, as the Ashe, the Juniper, the Chertie, the Firre, the Apple, and the Pirrie: and some againe if they be not cut, will perish: In cutting of them (as they are diuers) so is their order: for the Dake, as hee groweth slowly, so is he not to be cut, before he be of seuen, o; eight yeres growth: & the nêter the ground you cut him, the better he growes, though he may be polled seuen o; eight foot above ground: The like is of the Bêch, saving that he may sooner be cut. The great Willow, and the Poplar, are cut after one sort, as I shewd a little before: though the Osar may be cut every two yere, o; every yere. The Chestnut may be sold every seventh yere, both for felwell, o; for Aine Slaves. Trees are cut & sold sundry wayes, for either they are sold close by the ground, o; the body is sold, when it comes to be of the bignesse of a mans arme o; more, as the Willow is. Coppissed Woods are commonly divided into so many parcels, as may serue for yarely selling, some still growing whils others are a selling, & because some of them grow faster then other some, every sort hath his place, & his seas appointed. Some are sold every fourth yere, some every fift yere, as the Willow, & Poplar, & Alder, & the Birch, some once in seven.

seuen piers, as the Chestnut, and some in more, as the Dake.

Now you are to understand that if your Coppisse or under-wood consist of Dake, Ash, Beech, Elm, Maple, Bassell, Whit-thorne, Blackthorne and such like, that then the elder your sale is, the greater is your profit: Eleauen being better then seuen, fiftene better then Eleuen, and one and twentie best of all. Now in cutting these underwoods you shall give direction to your fellers that when they shall make with any sayze and straight well growne Sapling, Dake, Elm, Ash, or the like, to preserve them, and let them stand, being of such fit distance one from another, that they may not hinder or trouble each other, in their growing; and when you shall finde upon a cluster many faire plants or Saplings of one kinde, if they be of equall height you may preserve divers, allowing them reasonable distance, but if they be of unequal height then save none but the chiefest, and such as are farthest asunder. Also if you finde any faire and well growne fruite-trees, as Chestnuts, Beere, Ber-risses and the like, you shall let them stand and cleare them from the droppings of the taller Trees; Now for the generall cutting up of the Wood, you shall cut it about five inches above the ground, and drawing your Crooks upward, cut the wood, slope-wise so; that is best to haillen on the new Spring. And those loosners which you preserve and suffer to grow still, you shall proyne and trimme as you passe by them, cutting away all superfluous Branches, Bolls, twigs and young Sprouts which shall grow neare unto the roote, or upon any part of the Bodie which is fit to be preserved for Tymber, and if you shall find that the earth have by any casualtie forsaken the Root and left it bare; you shall lay fresh earth unto it and ramme it hard and fast about it.

It remaineth, that I now shew you the manner of selling of timber, and what timber is meetest for every worke.

The season of selling, no doubt is to great purpose, whether it be for timber or fethell: for such Trees as are sold either in the Spring, or in Summer, though they seeme dry without, are notwithstanding full of moisture, and wetnesse within, which in the burning, will never make good fire: and therefore Coppisse and fire-wood, your best selling is in Winter: and



for building, it is best cutting of your trees in December, & January, the Snow being in the wane, from the twentieth, to the thirty day. Yet are there some that say, they have found by experience, that Trees being cut in January, are full of Sap: and therefore thinke it better either to cut them before, or after. Cato saith, the best time is about the twelfth of December, for the Timber Tree that beareth fruit, is best in season when his seed is ripe, and that which hath no seed, when it pillows, it is time to cut. Such as are flawed, serving for Pillers of Churches or other round workes, must be cut when they spring: Shingles, and such as the Hatchet must flaw, are to be cut betwixt middle Winter, and the beginning, in the Westerne Windes. Pliny affirmeth the best season for selling of timber, to bee while the Snow is in continuation with the Sunne. Viruvius an excellent fellow in building, doth will you to sell your timber from the beginning of Autumne, till the time that the Westerne windes begin to blow, the which windes begin to blow (as Pliny saith) about the first 30es of February: for in the Spring, all Trees are as it were with child, and bond all their force to the putting out of their leafe, & their fruit. Since then they be swappy, & not sound, by the necessitie of the season, they are made by the reason of their looseneffe sieble, and of no force: even as the bodies of women, after they have conceived, from their conception, till the time of their deliuerance, are not indged to be sound, or perfect. In like sort the trees in Autumne, when the fruit and leaues begin to fall, the Rootes drawing from the earth their sufficient sustentance, are restozed againe to their olde estate: beside, the force of the aire in Winter doth lessen and make sound the trees, and therefore it is then thought the best time to sell your timber. The manner of cutting of it this, first to cut it till you come to the middle of the pitche, and so to let it stand, that the sap that is in it, may descend and drop out: so shall not the moisture within putrifie, nor corrupt the timber, but passe clearely away. When you have cut it, & you see it drieth that it hath lest dropping, you may cut it downe, and so shall you be sure it shall best serue your turne. There are some Masters in building, that thinke it best after you haue sawne out your timber in boades, to lay them in water for thre or foure dayes, as if they be of Birch, for a longer

ger time, eight or nine dayes : and being ordered in this wise they shall neither (they say) be rotten, or woyme eaten.

There are diuers and sundrie uses of timber : such as are barraine, are better then the fruitfull, excepting those sorts where the male beareth, as the Cipresse, and the Cornell : in all trees the parts that grow toward the South, are harder, and sounder, which are almost covered with mosse, as with a cloake against the colde : the worst are those that grow in shadowie and watrish places, the massier and better during, are they that grow against the Sunne : and therefore Theophrastus devideth all Timber into three sorts, into cloven, squared, and round, of which the cloven do never rent nor coame : for the pith being bared, dieth up and dieth : they also endure long, because they have little moisture. The squared, and the round, or the whole timber, doth coame and gape, specially the round, because it is fuller of pith, and therefore renteth and coameth in every place. And such high Trees as they use for pillars and maine postes, they first rub over with Bullockes dung to season them, and to sucke out the sappe : for the moisture doth alwayes coame sooner then the dry, and dry better to be sawne then the green, except the Wake, and the Bore, that doe moze fill the taeth of the Sawe, and resist it. Some againe refuse to be glued either with themselves, or any other, as the Wake, which cleaveth as soone to a stone, as any wood, neither doe they well cleave, but to such as are of like nature : to be boied, the graine is woiser then the dry : the light and the dry, are harder to be cut : for Bannes and Withes, the Willow, the Wyome, the Birch, the Elm, the Poplar, the Vine, the cloven Bode, & the Bramble are best : the Hasell will also serue, but the first is the Willow : they have also a certaine hardnesse and fairenesse, mete to be used in graven workes. Among those that serue for timber, are most in use the Firre, the Wake, the Vine, the Larch, the Elm, the Elm, Willow, Cedar, Cipresse, the Bor, Birch, Plane tree, Alder, Ashe, wilde Wake, Date tree, Birch, wilde Olive, Bastholme, Walnut, Maple, Holly, and diuers others, used according to their nature, and the manner of the Countrey where they grow. The Firre tree,

tree, whereof I haue spoken before, giueth out Rozen, and his  
Timber is most so: it waxes wicker, and greatly esteemed for his  
height & bignesse, whereof are made the Ship Palls, & Pillers  
for houses: for it is very strong, & able to abide great force. It is  
used also in building, for great Gates, & Wains pokes: in fine, good  
for any building within, but not so wel enduring without doores  
& very sone set a fire. They used (as Theophrastus saith) in the  
olde time to make thell Gallies & long Boates of Firre, for the  
lightnesse sake, & their Ships for burden, of Pine tree, & Oak. I  
haue spoken a litle before, the timber whereof is best, both for  
inward buildings, & for the weather, & also well enduring in the  
water: Hesiodus woulde haue yokes make of Oke. The wicker  
Oke serueth also well in water wo:kes, so it bee not nere the  
sea: for there it endureth not, by reason of the saltnesse: it will not  
be pierced with any Angur, except it be wet before: neither so  
will it suffer (as Pliny saith) any Naile driuen in it, to be pluck-  
ed out againe.

The Elm is used for weather boards, and water wo:kes to  
make planks for low most vaults, for Bytchin Tables or Wal-  
lers Stalls, for Panes of wheeles and Arreltrees or any use of  
toughnesse. The Ash (as Theophrastus saith) is of two sorts,  
the one tall, strong, white, and without knots, the other more  
full of bay, ruggedder and harper.

The use of  
the Elm.

It is the onely Timber of all other for Ploughes, for ovi-  
marle Arreltrees, the rounds of wicker, Harrow Bulls, Coa-  
ches and the like, also the Ash, besides his manifold use o-  
ther wayes, maketh the best and fairest hozsemens staves and  
Pikes, whereof was made the staffe of Achille, which Homer  
so greatly commendeth: it is also cut out for ymagine bores.

Vie of the  
Ash.

The Birch, whereof I haue spoken before, although it be  
littell and tender, and may be so cut in thin bores, and bent,  
as he seemeth to serue onely for Caskets, Boxes, and Caskets:  
his colour being very faire, yet is he strong and hardie in bearing  
of weight, as in Arreltrees, for Caskets, & Caskets. The bark  
of the Birch, was used in olde time for vessels together Grapes  
in, and other fruit, and also for Caskets, and vessels to see  
sacrifice withall: and therefore Curus swore, that he brought  
nothing away of all the spoile of his enemies, but one peece  
of Birch

The Birch.

Eachen Cret, wherein he might sacrifice to his gods.

**The Alder.** The Alder is a Tree with straight bodie, a soft and reddish wood growing commonly in the watry places: it is chiefly esteemed for foundations, and in water too, because it never rotteth lying in the water: and therefore it is greatly accounted of among the Venetians, for the foundations of their palaces, & houses: for being driven thicke in piles, it endureth for ever, and sustaineth a wonderfull weight. The rinde is pulled off in the Spring, and serueth the Diar in his occupation: it hath like knots to the Cedar to be cut and wrought in.

**The Plane-tree.** The Plane tree is but a stranger, and a new come to Italie, brought thither only for the commoditie of the Shadow, keeping off the Sunne in Sommer, and letting it in, in Winter. There are some in Athens (as Pliny saith) whose branches are 36. cubits in breadth: in Licys there is one so greatnesse like a house, the shadow place underneath containing 81. fote in bignesse: the timber with his softnesse hath his use but in water, as the Alder, but drier then the Elm, the Ashe, the Bulbery and the Cherry.

**The Linder.** The Linder Theophrastus counteth best for the workman, by reason of his softnesse: it breedeth no wormes, and hath betwixt the Bache and the Wood, sundry little rindes, wherof they were wont in Plinies time to make Ropes and Matthes.

**The Birch.** The Birch is very beautifull and faire: the inner rinde of the tree, called in Latine Liber, was used in old time in stead of Paper to write upon, and was bound up in volumines, wherof bookes had first the name of Libri: the twigs & botes be small, and bending in, so to be carried before the Magistrate among the Romans, at this day terrible to pisse boys in schools.

**The Elder.** The Elder tree, both of all other trees least and easiest to grow, as experience teacheth vs, and though it be very full of pith, yet the wood is strong and good: it is hollowed to divers uses, and very light staves are made of it. It is strong and tough when it is drye, and being laid in water, the rinde commeth off as loose as he is drye. The Elder wood is very hard and strong, and chiefly used for: Boare speares, the roote (as Plinie saith) may be made in thin boades.

**The Figtree.** The Figge tree is a tree very well known and fruitfull, not

very high, but somewhat thicke (as Theophrastus saith) a cubit  
in compass: the Timber is strong, and used for many purposes;  
and sith it is soft, and holdeth fast whatsoever is fast in it, it is  
greatly used in Targets.

Boxe tree, is an excellent Tree, and for his long lasting, is  
bee preferred before others: it is of especiall use amongst  
Turners, Combe-makers, and Mathematical Instrument  
makers.

Juniper dyeth away betwixt: for with his labour, Eagles  
and Snaitles, and such like, are dyen away: it is very like to  
Cedar, but that it is not so large, nor so high, though in many  
places it groweth to a great height: The Juniper whether men  
counteth a hard tree.

As for the Cedar, it is a hard tree, and  
that the Temple of Diana should be built with rafters and  
beames of Juniper, for the end it might continue. It also keepeth  
for a long time, in so much as it is said, the rafters of Juniper  
kindled, have kept for a year together: The Quins, whereof our  
Painters use.

The Cedar tree, the barones of this timber is only waile, for  
it will never rot, nor be become eaten, nor decayed. It is  
built that noble Temple of God, in Jerusalem, of Cedar: It  
is very meet for the building of Galleries, Gallies: The Cedar  
the Eben, the Olive tree, do never chinke nor change. The  
of God: Barons trees always stand of Cedar, because it ever  
yieldeth a myrrour, as though it were.

Theophrastus writeth of  
Quins, as by what nature of it is in compass. The Cypress tree,  
the Pine, doth exceeding thin, but it is very hard, and  
Pliny observeth, that of the Cypress tree, the best is that which  
stands as of a great height, & deep in the earth, the straightness of  
somewhat, to bee employed in building. The Cypress tree is a  
great tree, commonly in winter, whose Timber is much used in  
building, as in Theophrastus is written, that the Cedar tree be-  
fore it fall, maketh a certain kind of noise, which it once  
happened in Asia, the people being greatly afraid, fled for  
distant out of the Cities. The wild Olive, of his wood is made  
of Quins, and of wood is a kind of Quins, of Holly is a tree  
whose leaves are full of prickles, which is the holly, and the  
barke, being both continually greene, the berries like the Cedar.

Boxes

The Cedar

Juniper

The Cedar

The Cedar

The Cedar

The Cedar

The Cedar

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The Cedar

of the rinde and cotes they make Birdlime; the Wood is very hard the branches will well winde and baine, and therefore ser- ueth excellent well for quickset hedges.

The Maple

The Maple, for the beautie of the wood is next to the Cedar, having a very sayre and pleasant graine, of the resemblance called Peacoches taile: with this wood Tables are covered most agreeable to the eyes, and other fine workes made.

The Date

tree.

The Date tree, whereof we have spoken before, hath a very soft wood.

The Cork

tree.

The Cork, his timber is tough. If you will chuse Timber for Stables, Chappes, Chests, Decks and the like, then you shall chuse the best of these trees, for this most smooth, sweet and delicate wood, though it is a very soft wood, yet in any of these frames it is exceeding long lasting and the heart thereof will never breed worme, nor will it in any time lose the colour.

Vse of the

Maple,

Beech and

poplar.

If you will chuse Timber for Armoies, Dishes, Bowles, Trapes, or any Turners ware, or for any Building worke, you shall then make choyce of the fairest and soundest Maple being smooth and unknotted, for it is the plainest graine & the whiter of all other, and although either the Beech or the Poplar will reasonably well serve for these purposes, yet the Maple is chiefly to be preferred, for fire and light are used the more, the Pitch tree, and the Yew.

The best coales are made of the softest wood, and the Date, and the wilde Oak, but the firer rather be fire the coales that are made of Yew tree, because they better stand the blasting, and burne so fast as the others. The Cedar tree, though the Timber be of great use, yet it is not so well to make Coales of, for the Yew tree, because as some of the Bellomen teach, the fire cracketh, and there is little work in it: but for building, the Timber thereof is altogether unsuit- able, because it doth easily break, and smoulder away: but being in postes unshaped, it serueth well enough within doore. The aptest to take fire, is the fig tree, and the white tree. The fig tree because it is soft and open: the white tree, for the softness and the sameness. The Red tree (as Virgilius saith) resisteth the fire, though Melchior (as I said before) saith about to disprove it.

For Co-  
les.

This



This is the opinion of the Ancients, but we finde by experience, that Oake, Elm and Ash make your longest and best building Coales. The Birch the finest and brightest Coale, and the Birch is: Sallow the swiftest burning Coale. Now for your small Coale, the twigges of the Birch makes that which kindles soonest, and the white thorne that which endure the longest; and the roots and hard knots of any before spoken of, makes the best Brands\*. In all the bodies of trees, as of lively creatures, there is skin, sinewes, blood, flesh, veines, bones, & marrow: their skin is their barke, of great use among Country people: the vessels that they gather their Wines, & other fruits in, they make of the barke of Linde tree, Firre, Willow, Birch, & Alder. The Oak hath the thickest barke, which though he lose, he dieth not, so; so beneficiall hath nature bene to him, that because he is commonly spoiled of his barke, she hath giuen him two barkes. Of his barke, are made Wantdoles & Slippers, & floates for fishing Nets, & Angles: if the barke be pulled off, the wood sinks: but the barke alwayes swimmeth. The next to the rinde in most trees, is the fat, the softest and the worst part of the tree, and most subiect to wormes: therefore it is commonly cut away. The sappe of the tree, is the blood, which is not alike in all trees, for in the Figge tree it is milkie, which serueth as a Kermet for Cheese. In Cherie trees, it is gummy: in Elmes, sal-tish: in Apple trees, clammy and fat: in Wines, and Deare trees watrish: they commonly spring the best, whose sappe is clammyest. The iuice of the Pulverie, is sought for (as Plinie saith) of the Whistians. Next to the fat, is the flesh, and next to that the bone, the best part of the timber: all trees have not any great quantitie of this fat and flesh, for the Wore, the Cornell, and the Olive, have neither fat, nor flesh, nor marrow, and very little blood: as neither the Veruillie, and Alder, have any bone, but both of them full of marrow. Reedes for the most part have no flesh at all: in flesh of trees, there are both veines and arteries, the veines are broader, and fairer: the arteries, are only in such trees as will cleave, by means of which arteries it cometh to passe, that the one end of a long beame laid to your eare, if you do but flip with your finger upon the other end, the sound is brought forth with to your eare, whereby it is knowne, whe-

The barke.



ther the piere be straight and even or not. In some trees there are knots on the outside, as the wenne, or the kernell in the flesh of man, in the which there is neither veine, nor arterie, a hard knop of flesh being clong, and rolled up in it selfe: these are most of price in the Cedar, and the Apple. In some, the flesh is quite without veines, having only certaine small strings, and such are thought to cleave best: others, that have not their strings, or arteries, will rather breake then cleave: as the Vine, and the Olive, will rather breake then cleave. The whole body of the Fig is fleshy: as the body of the Pastholme, the Cornell, the willow Wake, the Mulbery, and such others as have no pith, is all bony. The graine that runneth overthwart in the Wäch, was (as Pliny sayth) in the old time for his arteries.

THRA. There are other commodities beside the timber to be gathered of these trees.

MARIVS. Very true: (for as I said before) of the Pearlar, the Wke, the Chestnut, the Pine, and the Wäch, these trees that grow in the Woods, besides their timber, beare fruit also good and meete to be eaten. So of the Firres, the Pitch trees, and the Pines, we gather Rozen and Pitch, to our great commoditie & gaine: as of the Wke, the Wäch, the Chestnut, the Medlar and the Pine, we have fruit both meet for man, and also good for feeding of Hogs, and other Cattle. In time of dearth, both our forefathers, and we, have tried the good service that Acornes in bread hath done, yea, as Pliny & others have writtten, they were wont to be served in amongst fruit at mens tables. Neither is it unknowne what great gaines some countries get by Acornes Rozen and Pitch: The Gall also groweth upon these Acorn-bearing Trees, whereof I have spoken before. Amongst all the trees out of which runneth Rozen, the Tarro tree, a kinde of Pine, is fullest of sap, and softer then the Pitch, both meet for fire, and light, whose bords we use to burne in kind of candles. The Cedar sweateth out Rozen and Pitch, called Cedris. Moreover, of Trees, is Birdlime made, the best of the Certe tree, the Pastholme, and the Chestnut, specially in the Woods about Sene, and nere the Sea side, where they are carefully planted in great plentie, by the Birdlime-makers: For they gather the berries from the trees, and boyle them til they break, and

and after they haue stamped them, they wash them in water, till all the flesh fall away. Pliny affirmeth, that it groweth onely upon Oakes, Oakholme, Shaddes, Pine trees, and Firre. Birdlime is also made of the rootes of certaine Trees, specially of the Holly, whose rootes and barkes withall they gather, and lay them up in trenches, covered with leaues in a very moist ground (some doe it in dung) and there they let them lie till they rot, then take they them out, and beate them, till they be clammy, and after wash them in warme water, & make them up in balles with their hands: it is used (beside other purposes) for the taking of Birds. Besides all this, there sweateth out of Trees a certaine Gumme knowne to all men, as of the Cherry tree, the Plome tree, the Iuniper, the Olive, the Blackthorne, the Iule, and Almond. Out of the Iuniper, commeth vermin: <sup>Vermis.</sup> out of the Pirthe, Storax: out of the white Poplar. Amber. <sup>Amber.</sup> Plinie writeth, that Amber commeth out of certaine Pine trees in the fat, as a Gumme both from the Cherry tree. And thus these things that I haue here at your request declared, touching the order of Planting and sowing, I beseech you take in good woorth.

Soli Deo laus & gloria, per  
Christum Iesum;

*The end of the second Booke.*



## The third Booke:

Of Feeding, Breeding, and Curing.  
of CATTELL.

HIPOCONVS. EUPHOREVS. HEDIO. EYMAEV S.



That the breeding and feeding of Cattell is a part of Husbandry, and more joyned in kindred to the tillure of the ground, not only appeareth by Virgill, the Prince of Poets, who hath in his Georgicks thoroughly set forth the order thereof, but also by the witnesse of the more ancient Philosophers, Xenophon, and Aristotle. The like doth our common experience at home daily teach vs: so; albeit the trade of Tillage and keeping of Cattell is diuers, and the manner of occupying many times contrary the one to the other: as where the Grasser & Breeder, requireth a ground full of Grasse and Pasture, the Husbandman on the other side, a ground without Grasse, & well filled: yet in these their diuers desires, there appeareth a certaine fellowship and mutuall commoditie rebounding in their occupying of one the other, which Fundavius in Varro, doth seme by an apt comparison to prove: as in a couple of Shalmes, or Recorders, saith he, the one differeth in sound from the other, though the musicke and song be all one (the one sounding the Treble, the other the Base) in like manner may we terme the Grassiers trade the treble, and the tillers occupation

occupation the base, following Dicarchus, who reporteth, that  
 at the beginning, men lived onely by breeding and feeding of  
 Cattell, not having as yet the skill of plowing and tilling the  
 ground, nor planting of trees. Afterwards in the latter Degrad,  
 was found out the manner of tilling of the ground, and there-  
 fore beareth the base to the feeder, in that it is lower; as in a  
 couple of Records, the base to the treble, soethis using to keep  
 cattell for plowing, carriage, tinging of our ground and other  
 commodities: and on the other side, to till the ground for feeding  
 and maintenance of our cattell, it comes to passe, that though  
 the manner of occupying in tillage, and keeping of cattell be  
 divers, yet one of them is surely the same of the other. As as  
 it seemeth, they cannot well be a sundry: for without the ser-  
 vice of Horse and Oxen, we can neither plow nor tinge our  
 ground. Chaff, straw, and other offall of corne is rather to be  
 spent upon the ground, then to be sold, both for the Farmers  
 behoofe, and the Lords, and better bestowed upon the household  
 cattell, then upon the foreigners. Besides, the dung of the cattell  
 enricheth the ground, and bringeth great increase: and where as  
 there is no place (as Columella saith) but in the tillage of the  
 ground, they have as much neede of cattell, as men: the cattell  
 serve not onely for tilling of the ground, but also to bring in  
 corne, to beare burdens, carry dung for the ground, and so by this  
 and increase of the stocks: whereby they have their name  
 Iumenta, of helping, because they helpe and further us, either in  
 our labours, by plowing or bearing. Whether it is only sufficient  
 to nourish and bring up this kinde of great cattell called Iu-  
 mencia, but also the other lesser sort of Beastes, as Sheepes,  
 Swines, Goats: and of Fowles, Cocks, Peacocks, Duckes,  
 Pigeons, Hennes, Chickens, and other fowles: and things  
 belonging to Husbandry, wherewith the good Husband, beside  
 his own maintenance maketh great gaine: and if the ground be  
 for it, there ariseth oftentimes as great profit, as in tilling of  
 Corne, and that with smaller charges. For a pisse that ser-  
 ving to gaine full, the word Pecunia, money and Peculius, sub-  
 stance, or riches, being both derived from the Latine name of  
 cattell, may very well serve: for in the old time they used these  
 cattell instead of money; and their common penaltie was,

taken

The wor-  
thinesse and  
antiquitie  
of keeping  
of Cattell

taken in cattell, the greatest was thirtie Oxen and two Sheepe, every Ox valued at vi.s. vi. d. and every Sheepe at vi. d. The smallest was a Sheepe: the very like is yet obserued with the noblest & worthiest people, whose substance lyeth altogether in cattell. Cato being once asked by what part of husbandry a man might soonest be made rich: made answer, By Grasing: and being asked againe, which way he might get sufficient livelihood: he answered, By meane Grasing. Moreover, that the worthynesse and first originall of keeping of Cattell is of greatest antiquitie, and that the trade thereof hath alwayes, from the time of the Patriarchs hitherto, bene counted most honest, as well the Scriptures, as prophane Histories doe witnesse, which kinde of life, how acceptable it hath alwayes been to God, by those that liued in the first world, doth plainly appeare. But omitting further commendations which are needlesse in so good a cause, I haue here thought good, after the entreating of Tillage, Gardening, and Orchards, to describe as briesely as I can, the order and manner of keeping of Cattell: which skill though Varro diuideth onely into thre parts, I haue diuided into foure. In the first part I put the great Cattell for burden, as Horses, Ases, Mules, and Camels: in the second part, the lesser sort, as Sheepe, Goates, and Swine: in the third, such things as are belonging to the keeping and safeguard of Cattell, not for the profit they yeeld of themselves, but for their necessary use, as Shepheards Dogs, and Cats: of these thre parts, in this third Booke, I entreat of: the fourth I referre to the fourth Booke. Therefore good Hippoconus since both time and place requireth it, let me heare what you can say touching the Government, use and ordering of the Horse, which may worthily challenge the chiefest place; being the noblest, the goodliest, the necessariest and trustiest Beast we use in our service, and first giue me the signes of an excellent Horse, then his ordering and Breeding.

First, you shall know that Horses serue for sundry purposes. Some, for the Plow, the Cart, and the Pack saddle, others, for light Horses, Coursers, and Horses of seruice, others againe, for Stallions, and breeders: and therefore they must be chosen according to their seruice, Soldiers, and men of Warre, desire a

fitte

these Horses, contagious, swift, and well coloured. The husbandman would have his Horse gentle, large bodied, and meet for trauell and burden. Notwithstanding, the breeding and bringing up of them, is almost one: for in their breeding, we hope to bring them all to the Saddle.

He that hath a fancie to breede Horse, must first provide himselfe of a good Race, and then of good ground, and plentie of Pasture, which in other Cattell ought not to be so greatly obserued, but in Horses there must be speciall care thereof. And therefore, you must first see that your Stallion be of a good race, well proportioned, and framed in euery point, and in like sort, the Mare. Some reckon their goodnesse by their Countries, as thus; if you will breede for partiall and warre-employments, then the Neapolitan, the Sardinian, the Allmaine, the French are best, or any of the Bastardized in themselves, or with a faire well shaped and well mettallo English Mare.

If you will elect for swiftnesse and seruice, then the Arabian, the Barbaric, the Spanish, the Greeke, or any of these Bastardized in themselves or with the best English Mares. If you will haue for long trauell and seruice, then the English, the Hungarian, the Sweatchland the Poland, the Irish. If you will chuse for draught burthen and seruice, then any of the Benentene Provinces, either Bastardized in themselves or with our English races. Part.

The shape and proportion of the Horse, ought hardly to be considered, for the very looke and countenance oftentimes declareth the goodnesse of his nature. Therefore you must diligently consider his making, from the hiele to the head; first you must chiefly regard his feet: for as in building of a house, it is in vaine to regard the beautie of the upper stomes, if the foundation be ruinous: so the Horse that is not sound of his feet, will neither serue the Souldier, the Husbandman, nor the Trauailer. In your looking upon him therefore you must first consider his hooves, that they be not tender and soft, but hard and sound, round, and hollow, that the hollownesse may keepe his foot from the ground, and sounding like a Timball (as Xenophon sayth) may declare the soundnesse of the foot: so the horse that is full and fleshy, is not to be liked, and the Horses that have  
such

- such proofes doe easily halt; wherefore diuers commend a Hoofe like the hofe of an Affe, the pasternes next to the hofe, not too long, as the Hoof hath, for shaking off his rider, and bending of windgall, nor too short, for being hurt in stony ground. The legs and the thyes, sith they are the standers of the body; they ought to be even, straight, and sound, not ganty, with much flesh and veines, for such as haue these legs clad with much flesh & veines they with great iourneyes growe full of windgalls, and swellings, which will cause them to halt, which legs at the first soting, are as long as ever they will be; by reason whereof you may gesse what height the Hoofe will be of, being yet a Colt. The knees must be round, flexible, and small, and not bowing inward, nor stiff, the thyes large and well bayoned, his breast great and broad, his necke soft and broad, not hanging like a Coates, but upright like a Cockes, and well reining, his Pane thicke, falling on the right side, some like it better on the left, his head small and teane, for a great and heauie head is a signe of a dull Page, his moutzell short, his mouth wide, with large wyinkles, still playing with the Bit.
- The mouth. The Hoofe that hath a dry mouth is naught; his cheeke bones or Jawes would be thynne, and wide with a great westand, for a narrow Jawe shewes a strait wynde and an ill carryed head.
- The eyes. his eyes great, and bery, and standing out of his head, which is a signe of quickenesse, and libelinesse: hollow and little eyes are naught, and blacke: or pale flars in the eyes are to be dyspealed: these faults are best spied in the night by candle light. Columella commendeth blacke eyes. A wall eye is very good, sith as they say Alexander Bucephalus had. The eares must be short, standing upright, and standing, so the eares be the tokens of a Hoofes Romarke, which if they be great and hanging, are signs of a Page. The Noethills must be wide, the better to receive ayre, which also declareth a libely courage: his shoulders large and straight, the rydes bowing inward: the ridge-bone over the shoulder being something high, giues the Hoofeman a better seate, and the shoulders, the rest of the body is stronger knit together, if it be double: his rydes depe, well knit behinde, something bowing up, which both is better for the Hoofeman, and a signe of a great strength: his loynes, the harder they be, the



the better he listeth his snarlets, and followeth with the hinder,  
 and his paunch shall the lesse appeare, which both disgraceth  
 him, and burdeneth him: his belly must be gaine, his buttocks  
 large, and full of flesh, and lovable to his breasts, and his sides: The belly.  
The but-  
tocks.  
 so; if he be broad hanch'd, and well spred behinde, and goeth  
 wide, his pace will be the surer, which we may perceiue in our  
 selues, if we assaile to take up a thing from the ground stryding,  
 and not with your legs together, we take it up with more ease &  
 strength. His taile would be long, byrtly, and curled, the length  
 whereof is not onely a beautie, but also a great commoditie to  
 beate away flies: yet some delight to haue them entayled, speci-  
 ally if they be bound buttock. In fine, the whole body would be  
 so framed, as it be large, high, liuely sprighted, and well trusted.  
 Some horsemen would haue their horse to be limmed after the  
 proportion of diuers beasts, as to haue the head & legs of a Stag,  
 the eares and taile of a Fore, the necke of a Swan, the breast of a  
 Lion, the buttocks of a Woman, & the fist of an Ass. Other co-  
 ditions there be, for which they be liked, when they be pleasant,  
 first liuely, gentle, and tractable: for such, as Columella saith,  
 will both better be taught, and better away with trauell. Xen-  
 ophon accounteth it a signe of a good horse, if after the wearines  
 of his iourney he seeme to labour lustily: againe, the better the  
 horse is, the deeper he thrusts his head into the water when he  
 drinketh, and that (being a Colt) scribeth to out runne his fel-  
 lows in the pasture, and as Virgil saith, leape first into the wa-  
 ter, and passeth bridges, not carrying for any other, nor fearing  
 the ste. The style.

Touching the colours, there are diuers opinions, and of all  
 colours, lightly you shall finde both good and bad: so that the  
 colour is not so greatly to be regarded, if he haue other tokens of  
 a good horse, yet for beautie, and many times for goodness, we  
 make choise of colour. The best colours, as diuers suppose, are  
 these. The Dapplegray for beautie, the Bay horse for seruice,  
 the Blacke with white bayes for Courage, and the Bay horse of  
 true mist blood for continuance, as for the Bayrell, the Blacke  
 without white, and the touchable Strangray, they are repu-  
 ted Cholericke, the Bay horse, the Flea-bitten and the black  
 with white markes are Sanguinists, the blanke white, the  
 yellow

yellow dunne, the Riteglowed and the Pyebald are flegmaticke, and the Chestnut, the Houndumme, the Redd-Way and the blew gray, are Melanchollie: they are the better that have a starre in the forehead, and the foote spotted a little with white.

The Flea-bitten Horse probeth alwayes good and notable in trauell: the yellowish and the skued, or pied Horses, are discommended almost of all men, notwithstanding either of them (if they be well marked) probe oftentimes well enough, specially the yellowish, if he have a blacke list downe his backe from the necke to the taile. The Stallion therefore would be of one colour, strong bodied, well limmed, according to the proportion afoze. The Mares would likewise have the said proportion of the Stallion, specially to have large bodies, faire and beautiful, of one colour, great bellied, with large and square breast and buttockes.

The Stallion.

The Mares.

Age.

EV P. What Age count you best for hounds? and H. P. The Stallion may goe with the Mares when his teents and limbs be well knit and come to their growth, for if they be too young, they get but weake and wearish Colts: some use to let them goe together at two yeres old, but three yeres olde is the better: the Stallion will serue you from that time till twentie yeres, if hath bin sene that they have gotten Colts till sixty, being helped a little in their businesse, for it is not yeres but skill that abateth lust, as Aristotle afoze Plinie wrote. Yet some think them not mete for hounds before the fourth or fift yere, in which space they fede them lustily, to make them more courageous, for the lustier they be, the better Colts they bring; neither would they have under sixteen Mares, nor above twenty, for one Stallion. Herodotus writeth, that one Horse will suffice twentie Mares, but the number ought not alwayes to be observed, but sometimes more, sometimes lesse, according to the state of the Horse, that he may the longer endure: a yong Horse should not have above fiftene or sixteen Mares with him: the hounds must be sometime seved for danger and hurting of themselves, being in the meane time good regard to the state of his body, for he must be weaker and fainter then others.

EVPH. What age doe you thinke best for the Mare to goe to the Horse?

HIPP. The Mares will conceive at two yeres old, but I take it the better not to suffer them till they be thre yeres olde, and likewise I thinke them not mete for Colts after tenne, for an olde Mare wil alwaies bring a dol and heavie headed Fale: they goe with foale an eleaven moneths, and foale in the twelfth.

EVPH. How can you know their age when you be doubtfull of it?

HIP. That may you know divers wayes, but specially by the teeth. Aristotle affirmeth, that a Horse hath fortye teeth, of which he casteth the thirtieth moneth after his foaling soure, two above, and two beneath: againe in the beginning of his fourth yere he casteth likewise soure, two above, & five beneath; being full soure, and going upon his fist, he casteth the rest, both above and beneath: such teeth as come up againe be hollow: when he beginneth to be sixe yeres olde, the hollownesse of his first teeth is filld up; in the seventh yere all his teeth are filled up, and no hollownesse any longer to be seene: after which time, no iudgement of his age, by his teeth, is any more to be had: there are some that take upon them to tell his age by the ioynts of his taile, after the marke is out of his mouth. Palladius shewes, that a Horse when he begins to be olde, his temples ware hollow, his eye-bates gray and his teeth long. Aristotle saith, that the age of all foure footed beasts may be knowne by the skinn of their faires: for if it be pulde up and presently let fall againe, if it fall smooth, it declares a young beast, if it lie in wrinkles, it sheweth he is olde. A Horse lieth commonly twenty yeres, some thirtie, or fortye, and also to fiftie, as Aristotle saith, if he be of a good disposition, and well dieted: it is said there have bene Horses that have lived 75. yeres, the Mare lieth not so long as the Horse, nor the Stallion, so long as the Horse that is suffered to runne amongst Mares: the Mare leaveth growing at five yere old, and the Horse at seven.

EVPH. What time thinke you best for covering of Mares?

HIP. In the Spring, after the twelfth of March, I take to be the best; after the Spring in the rest of the yere they are to be

be kept from the Horse, for hurting of the Horse: for the Mare after she hath conceived, suffers the Horse no more; but beates, and strikes him with her heels: yet in most places, they suffer their stallions to runne with their Mares all the Summer long, and take it to be the best way for answering the Mares desire, for many times the Mare will not abide the Horse till Summer time, or August, and the August Colt proves commonly very saire, although the Colts that are foaled in the Spring, are not to be desired, because they runne all the yere with their dammes in good Pasture, and therefore it is best at that time to put the Mare to the Horse, for these creatures specially, if you restraine them, are most enraged with lust, wherof came at the first the name of that deadly popson Hippomanes, because it stirreth up a fleshly affection, according to the burning desire of beasts, which groweth in the forehead of the Colt of the quantitie of a fig, and blacke, which the damme doth straight, as soone as she hath foaled, bite off: & if she be predeu- ted she neither lodes the Colt, nor suffers him to sucke.

**EUPH.** What if the Mare will not take the Horse, is there no meanes to make her?

**HIPPO.** There are that rub her taile with Sea Onions, Nettles, or Spadder, and so provoke her to lust, sometime a scur- uie Jade is put to her, who when he hath gotten her good will, is straight removed, and a better Horse put in place. If the Horse be too stotofull, his courage is stirred up by wiping her taile with a sponge, and rubbing it about his nose. If we would have a Horse Colt, wee knit the left knee of the Horse with a corde: and for a Mare the right. Who like is to be obser- ued almost in all other beasts.

**EUPHORA.** How often must she be Housed before she take?

**HIP.** They take not a like, some are sped at once, some twise, some more. It is said, a Mare will not suffer above fifteen times in the yere: being oftentimes satisfied with fewer. They must be put to the Horse at times, twise a day, in the morning, and at night: when they are sped, it appeareth by refusing, and striking at the Horse. They say, that there is amongst these beasts a great regard of kindred, and that you can hardly force the Colt to Horse the Damme: for prove wherof they report, that  
where

that where as a certaine Horse-kaper did make his Horse; by covering his eyes, to cover his Dawning, the cloath being pulled away, when he saw what he had done, he ran upon his kaper, and slew him. As soone as she is covered, the Mare must out of hand be beaten, and forced to runne, least she lose that she hath received. Surely a Mare of all other beasts after her covering, doth runne either South ward, or Northward, according as she hath conceived either Horse Colt, or Mare Colt: her colour also doth change & become brighter, which when they perceive, they offer her the Horse no more. Some after a few dayes if they doubt her, offer the Horse againe, and if she refuse and strike (as I said before) they iudge she hath conceived.

**EUPHORA.** Must they be covered every yere?

**HIPP.** Such is our covetousnesse, as we like to have them beate every yere: but if you will have good Colts, let your Mares goe to Horse but every other yere, so shall they well answer your desire, howbeit the common use is every yere.

We see Mares sometimes to cover Mares commonly, and thereof is engendred the Foale, and soaled in the xij. moneth, as shal be said hereafter. Some say it is best to cut the mane of the Mare that shall be covered of the Mare, though others hold opinion that it shall abate her lust. The Mares that be with foale, must be well looked unto, & put in good pasture. And if through the colde winter, pasture be wanting, they must be kept in the house, & neither laboured nor fasted up and downe, nor suffered to take any cold, nor to be kept too many in a straight come, so casting their foales, for all these incommeniences will hazard their foales, yet to travell them moderately, wil do them rather good then harme, for too long rest will cause them to be restiffe, and to tyre sooner. Aristotle sayeth, that the Scythians did use to travell their Mares great with foale, after the time they began to stirre, supposing their foaling should be the easier, but good hede must be taken, that their bellies be not hurt with any thing while they are with foale: but if so be the Mare be in danger, either in casting her foale, or in foaling, the remedy is Polipody stamped, mingled with warme water, and given with a hohne: it is said that the smell of a Camell blisse, causeth them to cast their foales: you must every yere oberse your Mares,

and such as be unpolltable, as barraine, must be put away, for from their first foaling they are not to be kept above ten yeres, at which time they are busy enough, and may be well sold, but so will they not be after: The yong foales are not to be handled with the hand, for they are hurt with the lightest touch that may be. It must be taken into, that if the Mare be housed, there be some enough for her & her foale, & that the place be warme enough, that neither the cold harme it, nor the warme over-he it, and therefore the place must be well chosen, that is, neither too hot, nor too colde, & afterwards by little, you must bring up the Colt: when it groweth to be something strong, it must be put to pasture with the Mare, least the Mare receive hurt by the absence of it: for chiefly this beak of all others, most esteemeth her yong, & if she be kept from it, taketh harme. The foale that lacks his Dammie, is often brought up, of other Mares, that have Colts: the Mare must go in very good pasture, that the Colt may have store of milke. Being five moneths old, when you bring them into house, you must feede them with barley flower & branne at a twelue moneth old, you must either put them into good pasture, or feede them with Branne, Chaffe, and Hay. Varro will not have you to weane them, till they be two yeres old: and though I like not too soone weaning, yet wee use commonly to weane them at five or six moneths old, & to let them run in good pasture, which custome proveth not amisse. Wherever, as long as they run with the Dammie, you shall doe well to handle them now & then, least when they be put from the Dammie, they loose wilde: they must be taught to be gentle, and not only to abide a man, but to covet his companie, and not to be afraid at every strange sight, no; at every noise, but to come to it. Xenophon saith: we must (as men) provide Schoolemasters for our children so likewise teachers for our Horses, and appoint how wee will have them spoken: for as their service is divers, so must be their breaking. But heretofore shall speake more hereafter, when we entreate of Housmanship, and breaking of Horses: onely now we will deale with those that sucke, and serve for the Plow. To make them gentler, the whistles, and other Horse harnesses must be hanged by them, that they may the better be acquainted with them, both with the sight, and the ringing. Now  
when

when they be well tamed, and will suffer to be handled, Varro would haue you lay a Boy grobeling upon them twise, as thise and after to bestride them, and this he would haue done, when they be thre yere old, for then they grow most, and begin to be great harned. There be that thinke a Horse may begin to be handled at a yere and a halfe old, and Varro, at thide yere old, when their probender is giuen them: but we use commonly after two yeres to labour them gently, first in harrowing of new plowed land, which is good both for their foote, and their pace, and also with plowing, and such like exercises: whereby we use to acquaint them with colde and heate, in drawing together. It must be sene to, that they be euen matched, least the stronger spoile the weaker, while he deaueith the rating and whipping. Horses take lesse harme with drawing then with beating. Thus must they be used to reasonable travell, by reason whereof the will be they harder, and not so lightly take harme: but herein must be great discretion.

EVPH. What say you to Geldings: for in these parts we use Geldings most.

HIPP. They serue for some purpose: but he that will haue <sup>Of Guld-</sup> a good Gelding, must geld (as they say) a good Horse: they are cut at a yere old and eldes: I my selfe haue cut them at two yere old, and thre yere old: In cutting they lose their stomache: you must looke that they be in good plight when you cut them, for as they are at their cutting, they commonly continue. The Parts also use to be shapen, but not often, and with great danger.

EVPH. What manner of stable would you haue, for I haue sometimes heard, that the stable is of great importance?

HIPP. Your stable must be built in a drye place, for wetting <sup>The Stable</sup> the Horses horse, which you shall abode if you plank it with good shen plank, or (which Xenophon would rather haue you doe) with count paving stone, keeping it alwayes cleane from dung, & weeds, and after laying fresh litter, so as they stand hard, and lie soft. Xenophon would haue the stable so placed, as it may alwayes be in the walkers eye, & so be lightsome, least the Horse being used to the darke, his eye dauell at the light. Some thinke they will be the gentler, if they be used to the light, & the fairer, if they haue the sun at the rising in summer time: let



as much aire come to them both day and night as you can. In winter your stable should rather be warme, then hot, and therefore your stable must stand toward the South, but so as the windows may open toward the South, which being kept shut in winter, may be warme; and opened in Summer, you may let in the coole aire.

E V P H. The like we use in our Dre stalls.

Cuttryng. H I P P O. Besides, whereas the bodies of cattell, have neede of rubbing, as well as mens bodies, so many times it both the Horse as much good to be stroked down the backe with your hand, as to feed him. The Horse is to be continually curried, in the morning, at night, and after his labour. In currying of them we must begin at the head, and the necke: so; it is a vaine thing to make cleane the lower parts, and leaue the other foule. It is good also to obserue due times for his feeding, his watering, and his travell. Thus much of his exercise. Now followeth to speake of his diet: and because we have spoken before of his pasture, we must also say somewhat of his other feeding. The better a man would have his Horse to pounce, the better must he looke to his meat so; that good feeding (the Country people say) is a great helpe to the goodnesse of the horse. If the Horse be young (as I said before of Colts) he must be fed with grasse, chaffe, and hay: if he be elder and meete to travaile, his food must be the drier, as Chaffe, Weares, Beasse, Dates, and Hay. Chaffe doth not so well nourish, by reason of the drynesse, but it keeps the body in good plight: and because hard meate is hardest of digestion, it is therefore to be given to those that labour. The Rock or stud, must be pastured in large pastures and marshes, as also upon mountaines, & hilly ground, but ever well watered, not dry, rather champion then woody, rather soft sweet grasse, then high and flaggy: if the pasture be too short, they sooner wear their fore teeth, & are toothlesse before their age. And whereas every kinde of creature is naturally moist, a horse ought chiefly (whether he be young, or old) to be fed with moist pasture, for the better conservation of his naturall temperature. Some would have you in no wise to give your Horse grasse in the Spring time, but in June, or the fall of the leafe: they would have you give them grasse with the dewe upon it, & in the night season

season, Dates, and Hay. Holweir, in the colder Countries, in Germany, France, England, where the pasture is very good, they doubt not to scowze their horses with graine grasse & wardenes of the meddowes: and in the hotter Countries, they do the like with graine blades of Wheate, or Barly. Some use to give them Apples shaced in pieces, Coleworthe stalks, Cabadge-leaves, Carrets, graine Rye and such like, to scowze them withall, and thus much of scowzing of horses. Generally, whosoever will have his horse healthy, and able to endure travell, let him feed his horse with Dates, mingled with chaffe or straw, so shall he be temperately and well fed, and if so hee labour much, give him the more Date. His meate must be given him as some thinke best, in a low Hanger, set so low, as they are forced to eate their meat with some difficulty or travell, which they say is to make them bend their necks: by which exercise both the head and the necke groweth bigger, and they will be the easier to be bridled: besides, they will be the stronger, by reason of the hard setting of the fore-fete. Holweir, in some places, they use high standing Hangers: after what sort soever they be, they must allwayes be kept cleane, and well swept before you cast in their meate. Their Provender, though divers horse-couriers that live by sale of horse, doe feede them with sodden Rye, or Bean-meale sod, pampering them up; that they may be the fairer to the eye: yet is it not good to labour with. The best Provender that is, is Dates, and for default of them, Beanes dyed or Beanes spelled, or Pease dyed and mixed with Dates, Chaffe or Cabadge, which is Wheate and straw shred small together. Their Provender must be given them rather often, and little, then once or twice a day in great portions, least you glut them therewith: they are used to be fed commonly five times a day, when they stand in the Stable, keeping an equall number of houres betwene the times: when they travell, you may give them meate seldomer, but in greater quantity, and if their iournies be long, they must have Provender besides in the night, allwayes remembryng (as I said) that you glut them not. The better a horse feedeth the better will he labour. You must also beware that you give him no Provender, neither Dates nor Barly, after any great labour, till hee be thorowly

Prouender.

cold: notwithstanding you may give him a little hay to cole his mouth. The hay must be sweet & well made, and thoroughly shaken, before it be cast into the rack: and specially sene to, that there be no feathers of any fowle amongst it. If the horse be very hot after his labour, let him be well covered, and softly walked till he be cold, before you set him up: when he is set up, litter him well, least the coldnesse of the ground strike in to him: in any wise wash him not when hee is hot, but when hee is thorough cold, water him, and wash him, wiping him dry when you bring him in. If the Horse forsake his meat, some use to stampe Garlike and Pepper, and to give it him, rubbing his teeth well, till his stomacke come to him: some would have a clout wet in salt water, tyed upon a sticke, and thrust into his Jawes. In watering, you must looke well unto him, for (as Aristotle saith) beasts doe feede, and are nourished the better, if they be well watered. Horses and Camels, doe love best to drinke a thicke water, in so much as if the water be cleare, they will trouble it with their fæce: for the most part Bullocks againe desire a faire cleare water, and running. The same Aristotle also affirmeth, that a Horse may suffer thirte foure dayes without drinke. Varro wils you to water your Horses twice a day, which order we observe, that is once in the morning, and againe in the afternone: but in Winter, if they drinke but once a day, it sufficeth: before you water him, he must be well rubbed, and then led into the water up to the knees, specially if he be fat, he may goe the daper. Notwithstanding there are some that hold opinion, they ought not to goe so deepe, as their stoncs touch the water, specially if the horse be young. After March, and the Spring, it is very good to ride them up and downe in some River, which will exercise their legges, for the water drieth the legges, and restraineth the humors from falling downe, and keepeth them from windgals: as soone as they come from the water, you must with a little straw wipe them cleane, for the damp of the stable causeth inflammation in the Horses legs that be wet. The water (according to Vegetius his minde) would be cleare, and springing, other like it a little running and troubled in a clay ground: for this water, by reason of the thicknesse and fatnesse, doth better nourish and fæde the Horse, then

then the swift running streame: yet those horses that are used to the swift and cleare rivers, are commonly the strongest, and best travellers: and therefore it would be wel considered how the Horse hath bene accustomed: the colder the waters are, the lesse they nourish, the daper a Horse drinks, the fatter hee proves: & therefore some Horse-couriers use to wash their horses mouths, first with water, and after to rub them with salt, to give them an appetite to their meate and their drinke.

Thus much concerning the Plow-horse, the Packe-horse and the Carre-horse: Now for the Horse for warre-like service, for the Noblemans Padd-horse, for the Gadmans Travelling horse and other mens horses for pleasure, as Hunting or Running, they are of greater price, of higher condition, of more delicate Nature, and must have a more curious hand held over them both in their government and feeding; therefore whosoever is owner of any of these choyce Horses, hee must observe twice a day, that is, early in the morning by the spring of day, and at the beginning of the evening, at three or foure a clocke (according to the season of the yeere) to see him well dresse according to the order of good horse-manship: That is, after he hath clenched his Stable of all dung and filthinesse, put up his Litter, set things in order that are orderlesse, put his Horse upon the Widle, and brought cleane water into the Stable, Then to unclow his horse and to dresse him in this order, first curry him over with the Currie-combe beginning at the setting on of the head, and so descending downe to every outward part of the body and lymbe, the legges onely excepted from the knees and the Cambrells downeward; then beate away cleane the dust which the Currie-combe hath raised, then currie him all over with the French Brush, beginning with his face and cheekes, and so descending downe into every other part publike and private, legges and all, then dust away cleane what the Brush hath raysed, then Rubbe all his bodie over with your wet hands, and what your wet rubbe dry againe: then rubbe him over with a cleane dyie Wellen loath, after with a cleane Lymencloath, then Rubbe his legs from the knees and Cambrells downeward very hard with hard withen wispen, after pycke and cleanse all secret and obscure places, as Sheath,

Tuell, Chappys, thyghes scete, &c. then Combe down his Mane, Tayle and sozeto with a wet Manecombe, and lastly cloathe him up and wispe rounde; then water him and chaffe him a litle after his water; halfe an houre after give him a pottell of Dates and a pinte of spelt Beanes, then a small bottell of Hay: After none rubbe the Horse downe with a dype cloath turning up his cloathes and chaffe his leggs well with harde wispes, then give him a pottell of Dates and Hay if he want it. At foure a clocke at evening or soner (according to the season of the yere) dyesse as in the morning, water and feede. At nine a clocke at night, rubbe downe as at the afternone and feede in the like manner; give Hay so; all night, put downe his Litter and make the Bed soft, obseruing to keepe the Litter as forward as you can, so; the Horse out of his owne Nature will put it downe; and thus doe day by day in his ordinary keeping. But if you Travell, then be sure to give him his prouender so earlie in the Morning, that hee may stand two houres on the Wydell fasting before you take his Backe, and give him the double quantitie of prouender that you doe in his rest; in your Trauell use moderation the first houre, that the Horse may emptie himselfe, then after ryde as you have occasion; In travell to light at an hill will be your owne ease, and your horses health, so; you may both pisse your selfe and inlyze your horse to pisse also. Every time you light, looke to your horses Shooes both so; feare of losse, and least he should get either Stone, Bone, or Nayle into them: euerie time you Mount into the Saddle thrust your hand betwene the Horses backe and the Saddle, both before and behind, so; feare it should sit downe. If when you mount or in your Travell your horse shake his head or picke one eare forward and clappe the other close to his necke, or use other scowling gestures, then the Saddle wounds him at the poynts and you must looke so; prevention; and upon that side which hee clappes downe his eare, on that side of the Saddle it hurts. You must give your Horse water before you come to your Inne, and warme him well after it; when you come to your Inne neither wash nor walke, but rubbe cleane, cloathe exceeding warme and wispe rounde. After halfe an hower standing on the Wydell give Hay, but doe not vnbydable so; an hower after, then vnbydable

How to  
water and  
Feede,

Order in  
trauell.

Order after  
Trauell.

bawble, rubbe his head and legges very hard and well with  
 hard wispes, then turne up his cloathes and rubbe his bodie  
 and necke with hard wispes also; before you Slee geve him  
 his provender, pryke his side, and stoppe them up with Cowe-  
 dunge; After Supper, uncloathe and dresse him withall  
 painefullnesse (as before shewed) then cloathe warme (as be-  
 fore) then if you finde your horse is extrominately drie, warme  
 him a littell water luke-warme and geve it him; then geve  
 him more provender and Hay for all night; call for more  
 fresh Litter and so let him take his rest. Then whatsoever is  
 amisse either in Shoes, Saddles or Furniture, take such order  
 that it may be amended against the next morning, And thus  
 I thinke I have given you satisfaction for these choyce and  
 principall Horses; I will now descend and speake of such  
 Infirmities as by disorder, mischance, evill dyet, corrupt ayre  
 or such like doe happen unto Horses, and first I will speake  
 of inward Sicknesse in generall, under which I will com-  
 prehend all Surfaits and distemperatures, all over-rydings,  
 Fellowses, Staggers, foundryng in the Bodie, or any im-  
 perfection, that taketh away the chearefull countenance of  
 an Horse and maketh him drowpe, forsake his meate or use  
 any other languishment; any of which assayne as you shall  
 perceiue, presently let the Horse blood in the Necke veine,  
 and in the mouth; then if the Sicknesse be not exceeding  
 Contagious let him rest till the next morning, but if it  
 worke with any violence upon him, then two houres after  
 take two good Spoonesfull of London-Treacle and dissolve  
 it in neare a pinte of either Dragon-water, or Cardus Be-  
 nedictus-water, and warme it and with an Horse geve it  
 to the Horse; then if hee be able, ride him a little after it,  
 or otherwise walke him up and downe in some Sunnie and  
 warme place for halfe an houre, then set him up very warme  
 and let him fast at least two houres more, then geve him a  
 little swete Hay, or a fewe swete drye Dates: at Noon  
 geve him a verie swete Masse of Mault and water, which  
 if hee refuse to take, then drayne the Water from the  
 Mault, and presse and squeeze the Mault well, and so geve  
 him the Water with an Horse, and thus you shall doe for  
 the

The cure  
 of Diseases,  
 Of inward  
 sicknesses,

I. Cure.

thre dayes together. But in any wise be most carefull that you give no colde water, till hee have that strength of the body that you may ride him fourth to water, and that you may chaffe and warme him after he hath drunke; this is a readie, certaine, safe and easie Cure.

Now because the diseases in Horses are as many and as numberlesse as those of Man, & because I neither desire to clog the memory, nor oppresse the judgement; I will reduce and draw these Infirmities into as few heads as is possible, yet not so few but I will give a full satisfaction for all; Wherefore I would have you understand that all diseases in horses are either inward or outward; inward as offending the vitall parts, or outward as troubling the Members: the inward sicknesses I also divide into two Branches, that is, If either offends the heart or the braine; If it offends the heart, they be then the infirmities I last spake of, and for which I have given you already an approved Cure.

2. Cure.

If they offend the Braine, then we call them Apoplexies, Palsies, Colds of all kinds, Coughes wet and drye, Glanders, Spourning of the Chyne, Brokenwinde, Migrains, Dizziness and any thing that is like unto these: and the Cure is to take a pinte of Hacke and halfe a pinte of sweet Oyle, and beate them well together, then adde to them a quarter of a pinte of the Syctoppe of Vinegar, and when all is incorporate well together, warme it on the Coales & so give it to the horse, part at his mouth, but the greatest part at his Nostrils; then Ride and chaffe him after it, let him fast two houres, feede as at other times, and let him drinke no colde water but when he may have exercise after it, and be sure to keepe him warme.

3. Cure.

For all manner of Wormes, Belly-ake, Bellibound, Fluxes or the like, take the small hayres which grow in an Horses eares and are cut away when you coulle him, and the small short hayres that grow under his foretoppe, and about his eare Nores, and myre them with a few Dates and so give them to the horse to eat, and doe thus twice or thrice, and it is a most certaine Cure.

Now for outward diseases, they are either Naturall or Accidentall; If they be Naturall, they either grow from the Generation



Generation o: B:æde from whence the ho:se is descended, o: else from corruption of sode o: other unwholesome keeping; If they growe from the B:æde and Generation of the Ho:se, then we call them the *Wines, Wens, Knots, Bircells and Swellings*, o: Inflammations about the thioate. For any of which first clip away the hayze bare, then for a day o: two apply unto it moyst rotten Litter, then after clappe on a thicke plaster of Shoemakers ware, spread upon Allome Leather, & remove it not till the swelling either b:ake o: consume away. 4. Cure.

If they procede from corruption of Blood, o: sode, o: any o: ther unwholsome feeding, o: keeping, then wee call them *Impostumations, Eyles, Botches, Fistulas, Pele-evil* and the like. And the Cure is a thicke plaster of Shoemakers ware (as before shewed) till they are broken, & with Vnguentum Aegyptiacum (which is to be bought of every Apothecarie, and to lay a plaster of Shoemakers ware over it also; to make the Orifice in the lowest part that the corruption may descend downward, also (if the place be without danger) if you thrust a Rowell of hayze through it, and annoynt the Rowell once o: twice a day with the ointment last spoken of, it will heale much the sooner. 5. Cure.

There be also other diseases which procede from naughtie sode, and we call them *Farcies, Scabbs, Haungie, Leprosie, Scratches, Paines, Gules, Gallander, Sellander* and all of such like nature; And the Cure is to keepe Arismart & Booklime in old wine two o: thre nights, then boyle it til the hearbs be soft, and then with this water reasonable hot wash any general Skurffe o: Haungie, and for any particular Soze apply the hearbe and the wyne hot unto it, and it will kill the evill humor, and heale the grieve, onely you must not forget to take good Soze of blod from the Ho:se at the beginning of the disease. 6. Cure.

Now if his diseases procede from accidentall causes, as from Wounds, Bruises, Straines, Falls, Wurts in the Eyes, Excrescions, o: Broken Bones, then you shall to every one of these, take those severall medicines which follow, as first, if they be Wounds in what so: for ever taken o: received, you shall if it be great and in a fleshy part, o: any other part where convenient, if you may, first stitch it up with a Needle and redde Wke, then  
tayne:

saynte it with *Terpentine*, *Waxe*, & clarified *Dogges-grease* of each like quantitie, and halfe so much *Mercuriegrease* as any one of the other simples being molten all well together, and apply this *Salve* ( if the wound be great ) warme, if otherwise apply it colde being spread upon hurds.

8, Cure.

If they bee *bruises* whether gotten by stroke, naughtie *Saddles*, or other *Rushes*, from whence proceedeth many times old putrefied and most *Cankerous Ulcers*, you shall first if the *Tumor* be onely swelled, and not broken nor likely to breake, bathe it diuers times in the day with cold water; but if you find by the hardnes and sozenesse, that there is *Inflammation* and it will breake, then cut away the hayre, and apply either rotten *Litter* or a plaster of *Shoemakers-ware*, and when you finde the *Tumor* soft, lanch it, and saynte it with *Rosen* and *Terpentine* molten together: but if it be an open old *Cankerous Ulcer*, then take *Hallicke*, *Cloves*, greene *Coppozas* and *Brimstone*, of each a like quantitie, of *Sicke* double so much as of any one of the other, beate all to a fine powder, then burne it on a chaffing-dish and Coales, but let it not flame, then as the smoake ariseth, take a good handfull of *Lint* or *flaxe* hurds or *Towle*, & hold it over the smoake, so that it may receiue all the perfume thereof into it, then when it hath receiued all, put it into a very close *Bore*, and when you have occasion to vse it, first wash the soze with warme *urine*, then drie it, & lastly lay on some of this *lynt* or *Towle*, and thus doe twice a day, and it is a certaine Cure.

9. Cure.

If they be *Straynes* either of *Yoints* or *Synewes*, in what part or *Member* soeuer it be, old or new, take *Boates-grease*, *Wolearmoniacke*, *Blacke-soape* and *Serue-oyle*, of each a like quantitie, boyle them well together, and then apply it hot to the grieve, rubbing and chaffing it in exceedingly, and also heating it in very well, either with an hot *Wickbat* or hot fire *Shovell*, or an hot barre of *Iron*, and thus doe once a day, and it will not onely cure the *Straine* but will keepe the member from growing soule, knotted or gourdied, and will also take away all *swellings* or *paines* of the *Limbes* whatsoeuer.

10. Cure.

If they be *Calls* or *Chaffings* off of the *Skinne*, of what kinde or nature soeuer they be, whether in the *Backe*, *Limbes*

or

as any other outward part of the body, you shall take old Wine and Salt made warme and therewith wash the Gall. Then strooke or pounce upon it the powder of unslaaklime, or the powder of Honey and Lym, made in this maner: Take of Honey halfe a pinte, & with the purest powder of unslaak Lym, make it into a stiffe past; then upon a Tyle, stone over the fire Bake it as harde as may be, then beate it into fine dust, and so keepe it in a Bladder or Bore, and cast this upon the Gall, and it is a most certaine and appoyoned Cure.

If they be any hurts in the eyes, as Strokes, Inflammations, 11. Cure. Winne, Tebbe, Canker, Pone: or any other mischief whatsoer be, you shall take a pinte of Snow water and mire with it two or three diamas of white Coppas, and therewith all wash the eye Morning and evening, and it is a certaine Cure.

If they be Excessions of Bones, as Splents, Spadens, 12. Cure. Curbes; Kingbones, Nodes or such like, in what part or member soeuer they be, you shall then take the Rots of Clicampane well clesed, and lap it up in a Blowne paper, then wet it and rost it (in hot glowing Cynders) as you would rost a Tarden, till it be exceeding soft: then taking it out and opening it, even as hot as the horse can suffer it (so you must not scale) after you have rubbed and chaffed the Excession, clap this therunto and binde it on harde, and thus doe others dayes till you see the Excession is consumed.

If they be broken Bones, or Bones out of Joynte, you shall 13. Cure. after you haue placed them in their due and proper place, first anoynt them with the oyle of Swallowes, or with Porce grease very warme, and then clap about them this plaster or Cerrot: Take of Bitch a quarter of a pound, & as much Virgin Ware, of Rozen halfe a pound, of the iuyce of Hop halfe an ounce, of Calhamum halfe an ounce; of Pirhe secundarie halfe a pound, of Suelum Arabicum halfe an ounce, of Deares suet, halfe a pound, of Populeon halfe an ounce; of the drops of Stozar halfe an ounce; Boyle all these together in an earthen pot, and after it is cold, take of Bitumen halfe a pound, of Ammoniake an ounce and an halfe, and of Costus as much: Beate these into fine powder, and then incorporate them with the other, and boyle them

them all ower againe very well; which done, pour the whole mixture into cold water, and then Kelle it into feuerall bigge Molles plaſterwiſe, after ſpread this plaſter upon leather, and ſould it faſt about the offended Bones, then with ſoft and ſweet ſoplenſs of Wood, ſo ſoplen the member as it may not mowe, and ſo let it reſt fullie out twentie dayes ere you dreſſe it againe; And in any caſe ſo ſoling the hoſe that he may not by any means (during that time) put his member to the ground, which a little diligence and paine will eaſily doe.

## 24. Cure,

If your hoſe have any infirmittie in his bones, as Quiltes, bone, Dierreach, Wicke, Croone ſcabbe, Rotten Frith, or any ſuch vicerous diſeaſe, you ſhall firſt ſearch it and lay it open, then take young Nettles and chop them ſmall and mixe them with ſoape and ſalt, till you have brought them to a ſtiff ſtatus, then waſhing the ſore firſt with vyne and ſalt warme, binde on this ſalue, & let it lye ſull ſoure and twentie houres, and thus doe (if the ſore be great) ſo thre or ſoure dayes together, then having drawne out all the venome (as this ſalue will quickly doe) then take a ſpawnefull or two of Trayne oyle, and as much Ceruſe or white-lead as will bring it to a thick ſalue, waſhe and mixe them wel together, then ſpread it upon the ſore morning and evening till it be whole, which will be effected ſodainly, ſo nothing both dayes up ſomer, nor is more kindly and naturall ſo the healing of a new hooſe then this.

## 25. Cure,

But if the hoſe be foundered, ſtrattized or elſe heated in his ſide, then you ſhall firſt pare him as theym as may be, ſo that you may diſcerne the quicke all ower, then let him blow at the Toes, and take great ſore of blood from him; but in any caſe cut not the veine in ſunder. After you have ſanct the bleeding by clapping Lome and Tallow upon the veine, then ſacke on hollow ſhoes; and ſop them full of Hogſ-greaſe and Swanne boyled to a Pulvis, even ſo boyling hot as may be, and renew it not above twice in ſeven dayes, and it will bring his ſide to their full perfection againe, without any great loſſe or trouble.

## 26. Cure,

If your hoſe have either broken hooves, or bricked hooves or if his hooves be weak, tender & imperfect, or if he treade nicely and not houldly, but tryps & ſtumbles upon every ſtone, take of Garlick heads ſeven ounces, of Pearbe-of-grace three handfull

full of Alloms beaten to powder seven ounces, of Barroldes, greas old two pound, and a great handfull of Ases dung, then hoyle and mingle them altogether, and with this both stop the Hoyses fete, and also anoynt the Crowne and the hailes, and it will worde an hard, tough and strong hoyle.

As for the common Infirmitie in an hoyses pynie parts, which are Swellings, Inflammations, Incorring and such like you shall but anely swime your Hoyle in colde water morning and evening, and it is a present helpe; This also cureth Stiffeling in the hynder leggs, and helpeth many hidden straynes and dislocations, for which ordinarie Farriers cannot give any account. Thus you see these fewe medicines will cure any infirmitie in an hoyle, which any shallow memorie may carrie without burthen, therefore he that refuses the trouble, it shalbe not though he be punished with a lame Iade. But I feare I have held you too long with the hoyle, I will now proceed and treat of the Aste and Asule;

Ases are commonly kept, yet not to be little set by, because of their sundry commodities, and the hardnesse of their feeding; for this poore beast contents himselfe with what meat so ever you give him, Whistles, Wyers, Stalkes, Chaffe, (whereof every Country hath Roze) is good meate with him; besides he may best abide the ill looking too of a negligent keeper, and able to sustaine blowes, labour, hunger and thirst, being seldom or never sicke: and therefore of all other Cattell longest endureth: for being a beast nothing chargeable, hee serveth for a number of necessarie uses: in carrying of burdens, hee is comparable to the Hoyle, he draweth the Cart (so the load be not unreasonable) for grinding in the Mill hee passeth all others: therefore in the Country the Aste is most needfull for carrying of things to the Market, and Coame to the Mill. In Egypte Barbary (where the ground is very light) they have also their use in plowing: and the fine Ladies of the Country doe ride upon Ases richly furnished: yea, they be very apt to be taught, so as at this in Alcayre, you shall have them daunce very mannerly, and keepe measure with their quistion. Varro maketh mention of two so to: one twilne, whereof in Phygia & Lycania there are great Roze: the wilde Aste that are tamed,

are

are passing good, specially for breede, & they are easily broken if the other is tame, of which I mean to speake. The best are brought out of Arcadia, (although Varro, seems to commend the breede of Italy for goodnesse.) He that will have a breede of Ases, must have the Male and Female both of reasonable age, large bodyed, sound, and of a good kinde: the Male must be at the least thre yeres old: for from thre, till they be ten, they be fit for breeding; they bring forth their Colts sometimes at two yeres & a halfe, but thre yeres is the best age: the Female goeth as long with her burden as the Male, and dischargeth in all respects as the doth: but she will not very well retaine, except shee be forced immediately after the horning to runne about: she seldome bringeth forth two. When she foaleth, she gets her into some darke place, and keepe her selfe from being seene. They will beare all their life time, which (as Aristotle saith) is thirty yeres: they are put to the horse a little before the tenth of June, and beare every other yere: they bring forth their foale at the twelue moneth. While they be with foale, they must not be greatly laboured, for hazarding their foale: the Male must never be idle, for he is as lecherous as the Dogge, & by rest will ware naught. The Colt is suffered to run with the Dam the first yere, and the next is gently tyed up with her, onely in the night times: the third yere they are broken, according to their use. The Dam doth wonderfully love her young, so much, as she will not sticke to come thorow the fire to it: but the water shee dare in no wise come nere, no, not touch it with her scofe, neither will she drinke in any strange water, but where she is used to be watered, and so as she may goe and stand dry foote. They delight to be lodged in wide rooms, and are troubled with fearefull dreames in their sleepes, whereat they so pawe with their legs that if they lye nere any hard thing, they hurt their side: in drinking, they scarcely touch the water with their lippes, (as it is thought) for feare of wetting their goodly eares, whose shadowes they see in their drinking: no beast can worpe away with cold then this. If your Ases halt at any time, you shall thus remedie them, wash all the foote with warme water, and afterward make them cleane with a sharpe knife, which when you have done, take old chamber lye, as hot as may be, and melt there,

therein Goates suet : or if you have not that, Oxe fallow, and amount all the fat till they be whole.

Also of the Mare, and the wilde Assc. being broken, are bred Moles. Spoiles that run passing swiftly, & are wonderfull hard hoised, but rugged of their body, & mischieuous stomached, yet easie to be handled. the Mares soz bred, must not be under foure yeres: noz above ten: they are soaled in the twelfth moneth, as Horses & Asses are, as Aristotle saith: but Columella saith, their soaling time is not before the thirtenth moneth. The female concea- veth (as experience teacheth) assuredly after the seventh day: the male doth never better hoise, then when he is most tyred. She that concea- veth not before she hath cast her colts teeth, is taken to be barren, as she likewise that takes not at the first horsing. Those that are gotten betwixt an Horse and an Assc in olde time, were called Heyards, and such as were brought forth betwixt an Assc and a Mare, they called Spoiles. The Spoiles themselves (they say) doe never ingender: and if at any time they do, it was taken soz monstrous, accounting the cause of their barrenness, the contrarie tie of their kindes: which matter a long time troubled both Aristotle, and the rest of the Philosophers. Though Aristotle hath otherwhere written, that Spoiles do both ingender, & bring forth: and with him agreeth Theophrastus, affirming, that in Capadocia they do commonly bring forth, and ingender of themselves. The like doth Varro, and before him Dionysius, and Mago affirme, that the breeding of Spoiles in the Countries of Africke, is neither monstrous, noz geason, but as common as our breede of Horses: but the Spoile is both fayre, and better stomached, that is begotten of an Assc and a Mare. The Stallion that you meane to have soz your race of Spoiles, must be as fayre as you can get, having only this regard that he be large of body, bigge necked, broad, and strong ribbed, large, and brauue breasted, his thighes full of sinewes, and the legges well knit, of colour blacke and spotted: soz Asses (though they be commonly dunne) yet that colour agreeth not well with a Spoile: some say, that what colour you would have your Spoile to be, with that coloured cloake you must cover your Assc. The Assc so proportioned (as I have delivered) that you meane to appoint soz your Stallion, you must straight wayes take



take from his damme, & put him to some Mare that hath a Colt suckling of her: you shall easily deceive the Mare, by setting her in a backe place, removing her own Colt from her, and putting to her in stead thereof the Asses Colt, which she will nurse as her owne. Afterwards, when the Mare hath bene used to it a ten dayes, shee will continually after that time give it sucke. The Ass being in this order brought up, wil better acquaint himself with the Mare: sometimes though he be suckled only with his own damme, being brought up when he is young amongst Mares will wel enough keep company with them (as Columella saith:) but our Asses are of themselves desirous enough of the Mares, that they need not to be trained to the matter: for it is a wonderful coltish beast, & unreasonably weaponed. We must not be lesse then these vares old when he covereth your Mares, which must be in the Spring time, when you may wel feede him with grasse and good stoe of Dates, and Barly: neither must you put him to a young Mare, for if she have not bin hoised before, she wil so beat her waver, that she will make him like the wolve as long as he lieth: for remedy whereof, you must at the first put to the Mare a wilber Ass, that may woo her before, but not suffred to hoise her, & when you perceive that she is hoising, away with the raskall, & put to your Stallion. A place fit for this purpose, the Country people (as Columella saith) were wont to have, which they called a frame, or a Brake, with two tailes on both sides, and a little distance betwaine, that the Mare cannot stride, nor turne from the Horse, the lower part enclosed, and the Mare standing low, so the Ass may the better leape her, having the upper ground for his helpe; which when she hath conceived, and at the twelue moneths end brought forth, the yere after she must be suffered to run emptie, that she may the better bring up her colt. The she Holve (being a twelue moneth old) must be taken from the Damme, & let run upon Mountaines, or wilde places, for the hardening of her hooves, & the better enduring of labour, so the male is the better for burdon, and the female the quicker & libeliet: both the kinds doe travell well, and till the ground, if the plowman be not unreasonable, or the ground so stiffe, as it requireth a draught of Oren, or Horse. They will leade striking and sticking, if you use to give them Wine (as

Plinie reporteth,) who likewise writeth, that a Hoile will live  
four score yeres. Next the Hoile I place the Camell which  
is chiefly used in the East parts, which some suppose to be the  
serviceablest cattell for man that is, & as it were therunto one-  
ly framed, for he is humpback upon the backe for bearing of bur-  
dens. Also, he hath four knees, whereas the Horse, the Ass, and  
such others, have but two: for his hinder legs bow forwards as  
a mans knee doth, wherewith he kneeleth to receive his burden.  
There are two kinds of them, the Bactrian, & the Arabian: the  
Bactrian have two bunches upon their backs, and the Arabian  
but one, and the other on their breast to leane upon, both sorts of  
them lacke their teeth above, as the bullocke doth: they all serve  
in those Countries for burden, and to carry men in the watter:  
they are as swift as horses, but some a great deale more then o-  
thers: neither wil they break their pace, nor carry more burdens  
then they are used to: they beare a naturall hatred to the horse  
and can forbear drinke for foure dayes: he drinke when he  
may, both for that is past, and to come, troubling the water  
before with his foot, otherwise he delighteth not in it: he is  
ledde beside his Pasture, and such things as he gets in the  
Wood, with Dates or Barly, and Salt: he engendreth back-  
ward as the Elephants, Tygers, Lyons, Coonies, and such  
other, whose instruments grow backward: when they meane  
to goe to rut, they seeke the secretest and desertest places that  
may be: neither may a man at any time come nere them,  
without great danger. They goe with young a twelue  
moneth, and are made for breede at thre yeres old, and after a  
yere they conceive againe, they beare but one at once, as Ele-  
phants, and other great beast doe: they give milke till they be  
great. Againe, (as Aristotle saith) Dydimus in his booke of hus-  
bandry writeth, that the Camell hath a regard to his blood, as  
the Horse hath, & lieth neither with mother, nor sister. And the  
female Camel of Bactria, feeding up the Mountaines amongst  
the wilde Goares, is oftentimes breamed of the Goare, & con-  
ceiveth. Of the Goare and the she Camell, is engendred the  
Camell with two lumps upon the backe, as the Hoile is of  
the Ass and the Goare, and in other things resembleth his sire,  
as in bristled heares, strength, and not fainting in the myze but

going lustily through, and in carrying double so much as other Camels, as the same author saith. The females of them are spawde, so serue the better for the watres: they liue (as Aristotle saith) little yeres: others say a hundred yeres, and are subiect to madnesse, (as Plinie saith) there are a kinde of them called Camell opards, that haue the resemblance of two diuers beastes, th: hufes and hinder legges like an Dre, his forelegs and his head like the Camell, the necke like a Horse, being flecked white and red. Strabo saith, he is coloured like a fallow Deare, straight necked, and his, like an Ostridge, his head some thing higher then a Camels. But now leauing these I will speake of the Dre and his kinde.

Of the Oxe

By the worthinesse of this beast many great things receiued their names of them: for of the number beauty, and fertilitie of Haifers, did Italy (as they say) first take his name, because Hercules pursued the noble Bul, called Italus. This is the chiefe companion of man in his labours, and the trusty seruant of the Goddesse Ceres in many great things, for the royalty of the Dre, they deriued their names from the Dre: as in calling also the Grape Bunch a man: in fine, Iupiter himselfe thought good to conuert into this shape his sweet darling Europa. So: euer, of a rotten Dre were are legended the sweet Ders. Varro makes foure degrees in their age: the first of Calues, the second of Pearlings, the third of Stares, the fourth of Dren. The Ders: in the first, the Bul: calle, & the Cow: calle: the second, the Hayfar, & the Stare: in the third & fourth, the Bul: & the Cowe the barraine Cowe he calleth Taurain, the melch Cowe Hordom, from whence came & feasts called Hordica festa, because the melch: kine were then sacrificed. The goodnesse of this beast is diuers according to the diuersity of the Countrey. the best were counted in the old time to be of the brade of Albania, Campania, & Toscan: at this day we take the best kinde to be in Hungary, Burgundy, Friesland, Denmark, and in England. Of Bullocks, some are for the draught, some for the traile, & some for the paille: to what purpose soeuer they serue, whether it be for labour, for milking, for feeding, it is best alwaies to chuse such as are young, of lusty age, rather then those that are old & barraine: & words of covenant in the old time (as Varro saith) in selling of Bullocks, were these; do you want at these

these Bullocks, or Steares, that you sell to be sound, of a sound  
Heard, & without fault: The Butchers that buy for slaughter, &  
such as buy for sacrifices, use no word of warrantise: & though  
some Bullocks are chosen by their strength, some by the great-  
nesse of their body, yet the best commonly have these properties:  
large, well knit, and sound limbs, a long, a large, and a deepe  
good body, whitte horned, broad foreheaded, great eyed & blacke,  
his eares rough and hairy, his iawes to be large and wide, his  
lips blackish, his necke well brauned and thicke, his dewlappe  
large, hanging downe from his necke to his knees, his shoulders  
broad, his hide not hard or stubbozne in feeling, his belly  
deepe, his legs well set, full of sinewes, and straight, rather short  
then long, the better to sustaine the weight of his bodie, his  
knees straight and great, his feete one farre from the other, not  
broad, nor turning in, but easily spreading, the hayre of all his  
body thicke and short, his tayle long, and big hayred. Palladius  
thinketh the best time for buying of draught Oxen, to be in  
March, when being bare, they cannot easily hide their faults, by  
the fraude of the Seller, nor by reason of their weaknesse be too  
stubbozne to be handled. It is best to buy them of your neigh-  
bour, lest the change of ayre and soyle hurt them: for the Bul-  
locke that is brought up nere home, is better then the stranger,  
because he is neither troubled with change of ayre, water, nor  
pasture: if you cannot have them nere you, buy them from some  
like Country, or rather from a harder: and be well assured that  
you buy them even matched, lest in their labour the stronger  
spoyl the weaker. Looke besides that they be gentle, skilfull in  
their labour, fearefull of the goade, and the dyber, not drinking  
any water or hydge: great feeders, but softly, and not over-ha-  
stie, for such do best digest their meate. In choosing of Oxen  
or Hine, the very like signes are to be required, that the Bull  
differeth from the Oxe, in that he hath a more stouning and  
ferce looke, shorter hornes, greater, and thicker necks, so big: as  
it semes the greatest part of his body, his belly something  
gaunter, and matter for Miling of Hine. The Bull, before he  
be suffered to goe with the Hine, must be well fed with grasse,  
chaffe, or hay, & kept severally by himselfe, neither must he goe  
to the Cowe, till the tenth of June. Varro would not suffer him

before the rising of the Lira: but Aristotle would have him all the  
 yedoyng time, to go in pasture with the Kine. The Cowe like-  
 wise would be high of stature, and long bodied, having great  
 udders, broad forehead, faire hoines, and smooth, & all other tokens  
 almost that is required in the Bull, specially to be young: for when  
 they passe twelue yeres old, they are not good for breed, but they  
 live many times farre longer if their pasture be good, and they  
 kept from diseases. The old Cowe giveth more milke then the  
 yong, according to the Country peoples proverbe, old Kine more  
 milke, yong Hennes more egges. Again, vnder thre yeres old  
 you may not suffer them to goe to Bull: if they chauce to be with  
 Calfe before, you must put the Calfe from them, and milke  
 them for thre dayes after, least their udders be sore, afterwards  
 forbeare milking. Plinie writeth, that at a yere olde they be  
 fruitfull, but the breede will be little, as it happeneth in all too  
 timely ingendryngs. You must every yere in these beasts (as in  
 all other) sort your stocke, that the old that be barraine, or un-  
 meete for breeding, may be put away, sold, or removed to the  
 plow, so: when they be barraine (as Columella saith) they will  
 labour as well as Dren, by reason they are dyed up, but we use  
 commonly to fat them: their age is known by the knots and cir-  
 cles of their hoines, which Plinie marketh likewise in Goates.  
 The time for going to Bull, some take to be best in the midst  
 of the Spring: Palladius would have it in Iuly, for so in the ninth  
 moneth she shall calve, for so long she goeth with Calfe (as the  
 common people say) a Cowe and a Quean hath both one time.  
 In many places they desire to have their Cowes goe to Bull a  
 thirty or forty daies after the tenth of Iune, that they may calve  
 in March, or Aprill: that they should have much milke, so order  
 the matter, as their Kine go, to Bull from the Spring, to Win-  
 ter, where by they alwaies milke some: at once bulling she con-  
 ceibeth, if she chauce to faile, she goeth to Bull againe within  
 twenty dayes after: some say, if so be the Bull come downe on  
 the left side of the Cowe, it will be a Cow-calf, if on the right  
 side a Bull-calf. The Quakers affirme, that if you will have a  
 Bull-calf, you must knit the right knee of the Bull, and for a  
 Cow-calf, the left: Varro saith, that if you put the Cow to the  
 Bull immediately after gelding, she conceibeth, Columella affir-  
 meth

meth sufficient wine to be enough for one Bull. I thinke he will well enough serue twenty wine, if he be such a Bull as I described: if you have good stoe of pasture, you may let them go to Bul every yere, but you must beware your wine be not too fat, that will hinder their being with Calfe. The Cowe should when she is redaxing, have but short pasture, and the Bull his belly full: so shall neither she be too fat, nor he unlusty. If the Cowe will not take the Bull, you must stampe sea Onions in water, and rub her under the taile with it: if the Bull be not lusty enough about his business, take the pæzell of a Stagge, burne it, and make it in powder, and with a little wine and the powder, bathe his bones, and his pæzell withall, which will serue for the like purpose in all other beasts (as Quotilian saith.) A Bul ought not to leap the Cowe above twice in a day as some think, but we find by experience, that he may oftner. In some places they have common Bulles, & common Boares to every Towne: A Bull will wære furious at the sight of any red thing, as the Elephāt & the Lyon, which can in no wise abide the sight of any white thing. A Cowe will give sucke to a strange Calfe, but let not the calves lye with them in the night, for feare of overlaping them. Some weane them at the first, & suckleth them with Milke, & Whey, having a little Branne in it, or floure, wherewith they bring them up, till they be able to fæde. Whether you meane to reare them for breede labour, or feeding, you must let them want no stoe of good pasture: for though they be of never so great a breede, yet if their pasture be scantie, they will never come to their full growth: for pasture makes the beast (as the Countrey people say.) Mares, and the old Husbands, would have you to gelde them while they be very young, which order was likewise obserue in cutting of them: and in the Spring, or at the fall of the leafe, when they be three moneths olde, or there about, was use to gelde the Bull Calves, and spay the Cowe Calves, sewing up the wound, and anointing it with fresh Butter. Columella would not have them cut, but their bones broken by little & little with an instrument, which kinde of gelding he best liketh, because in the little yong ones, it is done without bleeding: for when they be something growne up, it is better to cut them at two yeres olde, then at a yere olde,



which must be done in the Spring, or at the fall of the leafe, the  
 Spone being in the wane: you must tye up the Calf to a  
 frame, & before you cut him, you must fasten about the sinewes,  
 wherby the stones hang, a couple of small sticks like a paire of  
 tongs, and taking hold therewith, cut away the stones, so as a  
 little of the upper parts of them may remaine with the foresaid  
 sinewes: so by this meanes you shall not hazard the beast by  
 overmuch bleeding, neither is his stomacke quite taken away,  
 but hath something of the sather remaining, and yet loseth his  
 abilitie of ingendring. Notwithstanding if you suffer him im-  
 mediately upon his new cutting to goe to the Cow, it is cer-  
 taine he may get a Calf, but let him not so doe, soz feare of  
 bleeding to death. The wound must be annointed with the  
 Ashes of Vines, & Lytharge, and he must not be suffered the first  
 day to drinke, but nourished with a little meate: thre dayes af-  
 ter he must be dycted, according to his feblenesse, with graine  
 bowes and sweete grasse cut soz him, and looked to, that he drinke  
 not too much: and if you will, you may annoynt the soze soz  
 thre dayes with Tarre, and a little Ashes, and Oyle, to  
 heale him the sooner, and to keepe the place from flies. You  
 must use them while they be yet young to suffer to be handled,  
 and stroked, and tyed up to the Spanger, that when they shall  
 come to be broken, they may be handled with moze ease, and  
 lesse danger: but Columella forbids you to meddle with the  
 breaking, or labouring of them, before thre yeres old, and af-  
 ter five: soz the one is too soone, and the other too late. Those  
 that you have taken up wilde, and be well framed, and propor-  
 tioned, according to my patterne, you shall handle and breake  
 in this sort: first of all, see that you have a large roome, where  
 the breaker may easily goe up and downe, and out at his plea-  
 sure, without any danger. Before the stable you must have a  
 faire field, that the stables may have libertie enough, and not  
 be feared, or haltered with trees or bushes. In the stable, you  
 must have certaine stalles or bowdes, yoke-wise set up, a seven  
 foute from the ground, to which the stables may be tyed: this  
 done, chuse you a sayre day soz the purpose, and taking them up  
 bring them into the stable: and if they be unreasonable, wilde,  
 and curst, let them stand tyed a day and a night without any  
 meate,

The breas-  
 king of  
 yong cattell



meate, to tame them withall: afterwards let him that keepes them, offer them a little meate, not above wayes, or behind, but before, coing them all the while, and speaking gently to them, stroking their backs, and their neckes, and sprinkling them with a little sweet wine, taking good heed, that they strike him neither with head, nor with houle: for if he once get that trick, he will never leaue it. Thus doing a little acquainted with him, you shall rubbe his mouth with salt, and let downe into his throat certaine lumps of salt tallow, and poluing after a quart of good wine, which will make him in thre dayes as good a fellow as you would wish him to be. Some use to yoke them together, and let them draw some light thing, or plow in a light plowed ground, that their labour hurt not their neckes.

The readier way of breaking them, is to yoke them with an old Oxe, that may easily instruct them: if he happen to lye downe in the furrow, do neither beat him, nor scare him, but binde his feete together, and let him lye, that he may neither sturre, nor fcede: which being well punished with hunger, and thirst, will teach him to leaue that sullen trick. The feeding of this kinde of Cattell is diuers, according to the diuersitie of Countreies: and the purposes for which you keepe them, for those which you keepe and call weanlings or rearing, and are of one, two or thre yeares of age, and are onely to maintaine and uphold the store, are to be kept upon your hardest grounds and earthes that yeeld the least profit, whether they be Woods, Parks or Pastures inclosed, or Heathes, Moors, Downes and other wild unlimited places uninclosed, both Winter and Summer, till they come either to be broken to the Plow, to be sowed to the Peale, or to be sold in the Market. But if such grounds wil not maintaine them all Winter, then you shall sustaine and maintaine them at the stand Racks or Yocks both with white straw and pulkraw, and beside the reliefe to the Cattell it is an excellent way for the breeding of Peanre where it is wanting.

Now for your draught Oren, your milch kine & those which yeelde you any daily profit, they would be kept in grounds of some what better fertilitye where they may have a daper and a fuller bit, whether it be Pasture inclosed, or Commons kept and preserved, or Weathering grasse where they may oft and at your pleasure

A better way.

Feeding of the store Cattell.

Feeding of the draught and milch Cattell.

pleasant to be rendered any of which will sufficiently serve for the Sommer season. But in the extremitie of Winter you must haile your draught Cattell and feede them when they labour either with cleane Hay, or at the worst with blend-fodder which is Hay & straw mixt together, and when they lye Idle, straw it selfe is sufficient. For your milche kine, those which give milke would likewise be housed and fed with Hay (if you live in a bleake Champion Countrie where is scarltte both of Grasse and shelter; but if you live where there is warme shelter and stoepe of Winter fogge, there your kine may live as broad all the Winter, and onely be relieved in lying weather and deepe snowes with a little Hay. As for those kine which are drie and yeld no profit, they will shift well enough either a broad or at the stand racks with straw.

Now for those Cattell which you intend to fcede and make  
 Of Fattig fat either for purre or your private provision, those must be fed  
 of Cattell. upon your best and most fertillist grounds, and in the ordering of these grounds there are divers things to be obserbed, as first that they be well fenced; then well stozed of water that is sweet, and wholesome; for howsoever the Ancients hould opinion that these Cattell delight in troubled waters, yet experience shewes us, that putrefied waters breede mortall diseases: then that they lye free from Inundations, then that those Pastures which you lay and give rest unto from the beginning of November, you may graze at Candlemasse following, with houlding Beasts or Beasts beginning to fced, but with your fat Cattell not till our Ladys day; Those Pastures which you lay or give rest to at Candlemasse, you may Graze at May following, those which you give rest to at May you may Graze at Midsummer, those you lay at Midsummer you may Graze at Lammas, and those you lay at Lammas you may Graze in October & generally all the Winter following; Lastly you shall obserue, that those pastures which lye most in danger of water or any other casualltie, be first eaten, least by too long delaying an unseasonable time come, and so you be prevented both of your hope and profit.

Now in the eating of your pasture Groundes there are also many things to be obserbed, as first in the feeding of your fat Cattell

Cattell you must by all meanes provide that they have full bitt,  
 & high is to say, length of Grasse; for Cattell whose tounge are  
 the principall gatherers up of their fode, neither can no; will  
 bite neare the ground, unless extreame hunger compell them, &  
 then they take little toy in their fode. Next you shall ofte (as any  
 fit occasion will give you leave) remove and shift them into  
 fresh grounds, and not expect that they should eate your Crowns  
 downe to the bottome, but onely as it were skimming and take  
 the uppermost and choicest part thereof; and so they will feede  
 both swiftly and thourghly and so; that Grasse which they shall  
 leave behinde them, you shall eate it up after them with your  
 labouring Cattell, and lastly with your Sheepe. It is very good  
 also amongst your fat Beastes ever to have some few leane  
 Hoxes, for your fat Beasts take the delight to feede with them,  
 & sometimes to bite after them, there being as it were a kinde,  
 of sympathie or liking of each others Beathes. After your  
 Grasse is fully knit & hath received his whole strength, which  
 will be at Midsummer, then you may suffer your fat Beast to  
 eate a little neater unto the ground, til after Lammas, because  
 there is an extraordinarie sweetnes therein. These few obser-  
 vations well kept, there is no doubt but your Cattell will feede  
 wel to your owne contentment. Then when you see they are suf-  
 ficiently fed according to the aime of your purpose, whether it  
 be for the use of your household or the use of the Market, you  
 shall forthwith imploy them accordingly, for it is both the losse  
 of time and Money not to put them off by sale or otherwise  
 allone as they are come to the ende of your desire. For these  
 rich grounds will sometimes make two returns in the yeare,  
 sometimes three, which is a great profit, and I have heard  
 sometimes of four, but it is very rare, and the Cattell that  
 feede must be very well stricken with stick before they be put un-  
 to feeding. But if your Ground will returne leane Beasts fast  
 twice through the yeare, it is Commoditie sufficient.  
 Now because it is not sufficient to say well or ill, you  
 shall tell when they are fat, and so you shall know the time and skill to  
 know the same, you shall observe these few rules following: First  
 when you see your Beast in the generall shape and Composure  
 of his body, shew most fat and well, such an order being  
 comely

How to  
 know a fat  
 Beast.

comely and each Bone covered in such sort as a perfect shape requireth, as no eye is so stupid as cannot tell when a beast looketh well or ill favouredly, you shall then guesse the beast to be well fed, especially when you see his huckell-bones round & not sharpe, his Ribbes smooth and not rough, his flanks full, his Pache thicke and his Cod round; this when you shall perceiue, then you shall handle him, and groping him upon the neather, most Ribbes, if you feele the Skinne loose and the substance soft under your hand, you may be well assured that the Beast is soundly fed outwardly, that is, upon the Bones; you shall then lay your hands upon his round huckell-bones, and if that feele under your hand, softe, round & plumpe, you shall be assured that the Beast is well fed both outwardly and inwardly, that is both in flesh and Tallowe: then you shall handle him at the setting on of his Tayle, and if that handle big, thicke, full and soft, it is a true signe that the Beast is very well fed outwardly: then handle his Pache-bones which are on both sides the setting on of his Tayle, and if they feele soft and loose, it is a signe that he is well fed, both outwardly and inwardly; Lastly you shall handle his Codd and Pavell, if it be an Oxe, and the Pavell onely if it be a Cowe, and if they handle, thicke, round, soft, great and plumpe, it is a most assured signe that the Beast is verie well Tallowed within. And thus when any of these parts or Members shall handle in contrarie manner, you shall then Judge of the contrarie effects\*.

Your Driftsals, must stand dry: and be well flozed, either with stone, gravell, or sand: the stone will suffer no water to abide upon it, the other will soone drinke it up, and dry it: both sorts must be layed slope, that the water may runne away for coting the groundels, and marring their houses. Let them open toward the South, so shall they be drier, and the warmer: notwithstanding, let your windowes open North and East, which being shut in Winter, and open in Summer: may give a healthfull ayre. In fine, as nere as can be let the houses be neither too hot, nor too colde, and as dry as may be.

The Stalls should be right fute wide, that they may have room enough to lye in, that the nine great with Calfs hurt not one the other, nor the stronger Oxe wrong the weaker: and that

that there may be come for their keepers to come about them, and for feeding them.

Moreover, it is to no purpose to feed them well, except you also take to the keeping of them in health, and sound; and therefore whether they be in house, or abroad, you must alwaies have a speciall regard unto them, and to ever take them in the night, specially if there be any Rine amongst them with Calse. And though it be needefull at all times to oberie them, both morning and evening, yet most needfull is it of all other times, to see to them in the sleeping, when you first put them to pasture: for at that time, by reason of their change of diet, both Green Rine, and Hayfats, are most in danger of sicknesse: in Winter againe to take to them, that they be not, for sparing of charges, kept so poore, as they be utterly spoiled. And therefore you must spare no litter, specially when they come from labour, to rubbe them, and drye them, stroking them with your hands, and raising the hide from the flesh, which will do them great good. In coming from wood, or out of the pasture, you must wash their feet well with water, before you bring them into the house, that the dirt & filth cleaving to them, breede no diseases, nor soften their hofes. Beware of too much cold, or heate, for too much of either, killeth them with diseases: You must take heede they be not chaced, nor chaced up & downe specially in hot weather, for that bringeth them in a feaver, or causeth them to have a flire: Take heede also that there come neither Swine nor Poultre nere their stallles, for both of them with their dunging pollute the beast. The dunging of a sick Swine doth breede the Pestilence, or Murraine amongst Cattell: You must away with all manner of Carrions, & burying them well for infecting your Cattell. If so be the Murraine chance to come amongst them, you must presently change the ayre, & leber your Cattell farre & sundry in divers places, keeping the sound from the sick, that they be not infected, nor suffering them either to feed together, or drinke together.

The Pestilence or Murraine, is a common name: but there are divers kindes of it: in some Murraines the cattell drinell, and runne both at the nose and mouth: in others againe they be dry, and fall away more and more: sometimes it comes in the jamnes, and causeth them to halt before or behinde: sometime in their

The Murraine and his divers kindes.

their kidnies, and appeareth by the weaknesse of their hinder parts, wherein they same to have great paine in their loynes. Another kinde there is, that riseth like a farrine, with pimples over all the body, now appearing, and presently vanishing, and coming out in a new place. Another soyt, betwixt the hide and the flesh, wherein the humour sweateth out in divers parts of the body. Sometime it is like a leprosie, when all the skin is full of little pimples, and sometime a kinde of madnesse, wherein they neither heare, nor see so well as they were wont, though they looke sayre and fat, and lustie enough. Every one of these kindes, are contagious and infective: and therefore as soone as you perceiue them infected, you must presently put them asunder, for infecting the whole flocke, lest you impute that to the wrath of God (as many soles doe) which happeneth through your olone beaklinesse, and negligence. The common remedy (as Columella saith) is the roots of Angellica, and Sea Whistle mingled with fenell seede, and with new boyled Wine, Wheat flowre, and hot water to be sprinkled upon them. The common people, when they perceiue either their Horse or Bullocke sicke, or any other Cattell else, they use to take the roote of blacke Elleboz, called of some Consiligo, of others Bearesfoote: and for a Bullocke, to thrust it in the Dewlap; for a Horse, in the breast; for a Swine or Sheepe, through the eare, making a hole with a Bodkin, & thrusting the roote presently through, which the new wound holdeth fast that it cannot fall out, whereunto all the whole force of the poyson doth straight wayes gather, and runneth out in filthy water. Perfumes in this case (as Vegetius teacheth) do much good, as Brimstone, unblecked Lime, Garlick, wilde Mariorum, & Coriander seede, laid upon the soales, and the Dren so held as they may receive the smoke by their mouth & nose, that it may fill the braine, & their whole body with a healthfull ayre. It is good also thus to perfume the whole body, both for the health of the sicke, and preseruing of the whole. Before I proceed any farther, I will set you downe what kinde of Spices, and what quantitie you ought allwayes to have in a readinesse for your cattel. You must have one pound of Fenigreeke, halfe a pound of Liguersse, one pound of Ozaines, Turmericke, halfe a pound or a quarterne of Bayberies, one pound

Setters  
woort.

of

of Long Pepper, halfe a pound of Triacle of Gean, a pound of Aniffede, halfe a pound of Comin, halfe a pound of Padder, Oymment, halfe a pound. The hearbe whose roote you may use (as I said befoze) groweth in many places in the Woods: it was once brought unto me by chance from Darndall in Suffex, by one Richard Androwes, a good painefull featcher out of fuch things. For beſide his preſent remedying of Cattell, he ſerueth againſt diuers diſeaſes in a man, ſpecially for the Quartane, as the learned Mathiolus hath in his deſcription of Plants mentioned.

To returne to my Cattell: if they want their digeſtion, <sup>For Cru-</sup>  
 chafe not cudde, which diſeaſe is perceiued by often belching,  
 and noyſe in the belly, with forbearing of their meate, dulneſſe  
 of their eyes, and not licking of themſelues. Take a handfull of  
 Pellitorie of Spaine, as much Bearbegrace, as much of  
 Fetherfew, Sage, Hozehound, and Bay Salt, three pintes  
 of very ſtrong new drinke: ſethe them all together three or  
 foure walloppes, and giue it him bloud warme in the morning,  
 not ſuffering him to drinke till the afternone: if you neglect  
 this diſeaſe, ſo that he be payned in the belly, and full of griefe,  
 he will grone, and neuer ſtand ſtill in one place. For remedie  
 whereof, you ſhall binde his tayle cloſe by the Rump, as ſtraite  
 as may be, and giue him a quart of Wine, with a pinte of  
 the pureſt Oyle: and after dribe him apace for the ſpace of  
 a mile & a halfe: annoint your hand with greaſe, and rake him:  
 afterwards, make him runne againe: ſome uſe to let him bloud  
 in the taile, within a handfull of the rumpe.

There is a diſeaſe which they call the Wolfe, others the <sup>The Taile,</sup>  
 Taile, which is perceiued by the loſeneſſe, or ſofterneſſe betwixt  
 the ioynts: take the Taile and ſele betwixt euery ioynt, and  
 where the ioynt ſeemeth to be a ſunder, or is ſoft and not cloſe as  
 the other ioynts, there take and ſlit him the longeſt way under  
 the Taile, about two inches long, and lay in the wound Salt,  
 Hote, and Garlick, & binde it faſt with a clout about it. The  
 Cholicke, or paine in the belly, is put away in the beholding of  
 Geſe in the water, ſpecially Duckes, (as you ſayd befoze of  
 Hoxes: ) for the ſight of the Duck, as Vegetius and Columella  
 lay, is a preſent remedie to this beaſt.

For the Flire, or the Laſke, which in ſome places they call <sup>The Flixe,</sup>  
 the



the Ray, take Sloes and dry them in powder, and give it them to drinke: if it be the bloody fluxe, the old fellows were wont to cure it in this sort: They suffered not the beast to drinke in thre dayes, and kept him fasting the first day, & gave him the Stones of Reazins, or Grapes, dyed and made in powder two pounds, with a quart of sharpe tart Wine, and suffered them to drinke no other drinke, & made them eate the browning of wilde Olive trees, and Pastire trees: and if they mended not with this, they burnt them in the forehead to the very braine pan, & cut off his eares. The wounds, till they were whole they washed with Wre pisse: but the cut parts were to be healed with Oyle and Witch.

Laske in  
Calues.

If your Calues have the Ray or Laske, take sweet milke, & put therein the Remet of a Calfe, make it no thicker but as the Calfe may well drinke it, and give it him luke-warme.

The Cough

If your Bullocke have the Cough, and if it be but beginning, give him a pinte of Barley meale with the yolke of an Egge, Reazins boyled in sweet Wine and strained, a pinte: mingle them together, and give it him fasting. Also Graines beaten and mingled with flower, fried Beanes, and meale of Lentils, all stirred together, & given him in a mash. Columella would have you give them Grasse chopt, and mingled with Beanes that are but a little broken in the Mill, and Lentils small ground, and mingled with water. The old Cough they cured with two pound of Hyssope, steeped in thre pintes of water and mingled with flower, which they made him swallow, and afterwards powred into him the water wherein Hyssope had bene sodden, also Beason, with Barly water and sodde. When they had the Cough, and Consumption of the Lungs. To keepe them alive, they used to burne the roote of a Hasell, and to thrust it through their eares, giving them to drinke a pint of the iuice of Leks, with the like measure of Oyle and Wine. For the Cough of the Lungs, I use to give them long Pepper, Graines, Fenegrake, Wapes, Amilade, Oment-balles, Cummericke, and Spadder, beating them all together, and washing them in good Ale grounds. If your Calues have the Cough, take Centorie, and beate it to powder, and give it them.

The Feaver

If they have the Feaver, or Ague, you shall perscure it by the waiting

waſhing of their eies, the heauineſſe of their head, the diſbeling at their mouth, beating the veines, and heate of the whole body: let them ſalt one day, the next day let them blood a little be- times in the morning in the tayle, after an houre giue them a thirty little ſkalas of Colworts ſod in Dyle, Water, and ſalt, which muſt be powred ſalking in them, ſixe dayes to- gether. Beſide, you may giue them the tops of Olive Trees, Lentils, or any tender byrtings, or branches of Vines, and wipe their mouths with a ſponge, giuing them colde water thriſe a day.

The blood falling downe into the legs, cauſeth them ( as Vegetius ſaith ) to halt, which as ſome as you perceiue, you muſt ſtraightwayes looke upon the hoſes, the heate whereof Halting. will declare his griefe, beſide, he will ſcarſe ſuffer you to touch it. But if ſo be the blood be yet aboue the hoſe in the legs, you ſhall diſſolue it with good rubbing, or if not with that, with ſcarifying, or pouncing the ſkinne. If it be in the ſoote, open it a little with a knife betwene the two clawes, and lay to the ſoze, cloutes dipped in Vinegar and ſalt, making him a ſhoe of Wcome, and be well wate hee come not into any water, but ſtand drye. This blood, if it be not let out, will breed to matter, which will be long ere it heale : if it be opened at the firſt with a knife and made cleane, and after clouts dipped in water, ſalt and Dyle laid to it, at the laſt annointed with olde Swines greaſe, and Goates ſuet boyled to- gether, it will quickly be whole. This diſeaſe, as I take it, the countrey people call the Fotole, or the Wiſpe, which they ſometime cure with drawing a rope of ſtraw, or hayre, through the Cleſe, till it blaede, or by ſearing of it with a hot yron. If the blood be in the lower part of the Hoſe, the uttermoſt part of the Cleſe is pared to the quicke, and ſo the blood let out, and after the ſoot wrapped with cloutes, and ſhoad with Wcome, you muſt open the Hoſe in the middeſt, except the matter be ripe. If hee halt by reaſon of the Crampe, or paine of the ſinewes, you ſhall rubbe his knees, thighes, and legs, with ſalt and Dyle, till he be whole. If his knees, or ioynts be ſwolfe, they muſt be bathed with warme Vineger, and Linſede, or Dyle beaten and layd to it, with

with Water and Hony. Also Sponges wet in hot water, and dyed againe, & annointed with Hony, are very good to be layd to the knee: if under the swelling there be any humour, Leaden, or Barly meale sod in water and Hony, or sweet Wine, must be layd to it: and when it is ripe, it must be opened with a knife and healed as before.

All griefes generally, if they be not broken, must be dissolved while it they are new, with bathes, & fomentations: and if they be old, they must be burned, and the burning annointed with Butter, or Coates suet. If he have hurt his houle, or his hooft, stone Pitch, Brimstone, and greasie Tallow, must be burnt upon the soare with a hot yron. The like must be done when it is hurt with a Stubbe, a Thorne, or a Naile, being first plucked out, or if it be very deepe, it must be opened wide with a knife, and so handled: for kiled hales, take and cast him, and binde his legges fast together, then take your knife, and cut it out as nie as you can, and let him blade well: then take a penyworth of Herdegreafe, and the yolke of an Egge, and temper them well together, and bind them close to the place, and he shall heale. If the Woder of your hine doe swell, you shall bathe them with Iuy, sodden in stale Beere, or Ale, and smoke them with Hony coames, and Camomell. If the Bullockes feet be nere woyned, and subated, wash them in Dre pissé warmed, and kindling a few twigges, or sprays, when the flame is done, cause him to stand upon the hot imbers, and annoynt his hornes with Tarre, and Oyle, or Hogges greafe. They will neuer lightly halt, if after they have bene laboured, their feet be washed well with cold water, and afterwards their pasterns, and the places betwixt the Clies be rubbed with old Swines greafe.

Scabbies.

The scabbies, or mangenelle, is gotten away with rubbing them with stamped Garlicke, which also cureth the biting of a madde Dogge: besides, Pennyall, and Brimstone, beaten and boyled with Oyle, Vineger, and Water, and after while it is warme, a little Atom made in powder, and cast into it, doth cure the scabbie, being annointed in Sunshine. Others use to annoynt them with Butter, and Bullocks pissé: and some againe take Rozen, Tarre, and Wine, and use it as a Pulsteffe.

Hyde bound,

**Hide-bound**, is when the skinne so stickes to his backe, that you cannot take it up from the ribbes, which happeneth by suffering him to take cold after his sweat, or if after his labour he be wet with raine, or brought low with sicknesse: which, because it is very dangerous, you must looke that when they come from their labour, and are hot, you sprinkle them with Wine, and give them some peces of fat, or suet. But if they be already hide-bound, it is good you seethe some Bay leaves, and with the warme decoction thereof, to bathe his backe, and to rubbe him all ouer with Wine and Oyle mingled together, and to lift and plucke up the skin round about, and that abroad while the sunne shineth. If his bleeding Stench not after the cutting of the veine, the remedie is, to lay his owne doung to the place. A common medicine for all diseases (as Vegetius reporteth) is this: the roote of a Sea Onion, the roote of a Poplar, and the common Salt, of each a sufficient quantitie, lay them in water, and give it your Cattell to drinke till they be whole: which also being given in the beginning of the Spring, for the space of foureteene dayes, preserveth them from all sicknesse. Now that you have heard in what sort the old husbands did remedie the diseases in their Cattell, I shall briefly declare unto you the remedies that are obserued in sundry diseases at this day, whereof I have chopt in some among the medicines before.

The sicknesse of the Lungs is perceived, if the Dewlap be hard closed together very farre up: also in hard swelling the hide upon the backe, it cracketh, or snappeth much: also a short husking, and thrusting out the tongue withall: if it be much perished on the left side, he is incurable, which you shall perceive by the Hide, which will sticke fast on that side, and likewise the Dewlap: if he be farre gone, he will groane much. The remedie for this disease, is to take long Pepper a penny-worth, round Pepper as much, of Graines two penny-worth, of Pace as much, Cloves a penny-worth, of Anis seeds a penny-worth, of Cardus two penny-worth, of Triacle of Gean, the utter rinde of Walnuts dyed, and made in powder, Juniper berries powdered, Ore Lung wort, fetherfewe, Beardegrace, Camellie, Hoyle Spintes, Bay berries powdered, a penny-worth

of Garlicke, a quart of Chamberly, a pinte of Salt, a quantitie of Butter. Better him befoze, or immediatly after this medicine given.

Settring of  
Cattell.

The order of Settring a Bullocke is this: take Betterwozt, otherwise called Beare-sote, and Garlicke, like quantitie, peele and stampe the Garlicke, and pare the Betterwozt cleane, and wzappe them well in Butter; then cut the Dewlap two inches behind the sticking place, to the brestward, & cut it alongtwise about two or thre inches, and pull the Dewlap with thy finger, or with a sticke, round about, one side from the other, as much as you can possiblie: Then put the Betterwozt, Garlicke, and Butter, as much as thou canst well put in, and thus doe on both sides the Dewlap, then rowle him so that the string may goe through both holes on both sides the Dewlap, alwayes remembering to cut the Dewlap a hand b:oad, or above the bottome and in any wise to rent him to the bottome, befoze you put in the medicine. The third day after the Settring, looke to the opening the wound, and let out the corruption (if it be come down) if not, put in more of the medicine, and turne the rowle: and if it be much swollen, and hard, and will not rot, take a hot iron, and take up part of the soare, the skinne, and the flesh, in such place as thou shalt most conuenient, so as it come not to the bone, and thrust the iron through on the one side, and on the other, or once right under, if the swelling be right beneath, and Earre him wel if the sides be busie. Which sides, if they chauce to get into the soare, take a cloth, or towell, and lappe it about a sticke, and put it into skalding hot Earre, and so among the Pagots, searching ebery corner well. After you have pearced him with the hot iron, remember to take a little sticke, and Towe, and dipping it in Wallet Oyle, or woll Oyle, to rubbe the hole where the yron passed.

The Gall,  
or Yellowes

The sicknesse of the Gall, is knowne by the running eyes, or if he haue much yellow eare-waxe: it is also discerned by the browne yellowes under the upper lippe: the Cure is this: Take Chamberlie, good Ale-grounds, or Beere-grounds, hard Soale in powder, Gallwozt, beatts Lungwozt, Planten leaves, Wearbe-grace, Hempseed, or Hempe toppes, Garlicke stamped, a penyworth of Aqua viue; so: a great Bullocke, take almost a quart

quart of this medicine, for a small Bullocke, lesse: when he  
hath drinke, take Salt, & some of the wall, and leavened bread,  
& rubbe well his tongue, and all the roste of his mouth: then  
wash his backe, & chase it well with Chamberlie, luke warme;  
gather all these Hearbes in Summer, and kepe them, & make  
them in powder. This medicine serueth likewise for the Lungs.  
If a Bullocke be diseased in the Liber, he complaineth first in  
the legges, which will so grieue him, that he shall not be well <sup>For the</sup>  
able to stand, though he be in good liking: the remedie is this: <sup>Liver.</sup>  
Take a quart of good Ale (if it may be gotten) if not take  
Beere, put therein Liberwozt a good handfull, Wozmetwood  
as much, a peny-worth of Carlitche, halfe a peny-worth of  
Spadder, a peny-worth of round Pepper, as much long Pep-  
per, a peny-worth of Cloves and Gace, a peny-worth of Tria-  
cle, mingle them together, the Hearbs being powdered, and  
give the Beast a drinke luke warme. The signes of the  
Blaine are these, Swelling about the face and the eye, and  
somewhat in the body: if it bee in the body, it swelleth much  
there: the onely remedie is: Take and searce him in the  
mouth, if you perceiue blisters vnder the rootes of the tongue,  
or other place thereabouts, then cut them to the bottom, and  
set them out, and rub the place with Salt: searce him also in the  
body at the fundament, by the arme or hand of some young  
scurpling: and when his arme is in as farre as he can, let him  
turne his arme upward, and searce for the Blaines, Blisters, and  
breake them with his nayles, pulling them quize out: so that  
he amoint his hand well with Oyle or Sope. There is a  
disease called the Sprenges, wherein he will smite his head <sup>The</sup>  
backward to his belly, and stampe with his legges: you must <sup>Sprenges.</sup>  
put your hand into his fundament, as far as you can, and pull  
out the dung, then shall you steele blood, pull the blood quize out,  
and take a good handfull of Bay Salt, and put it in at twise, as  
far as you can: if he haue this disease, he will swell in the body,  
and couer much to dung. If he haue the Staggers, he will looke  
berped about the eyes, and cast his head backward: take the  
fourth part of an ounce of Pepper, bruisse it, and take halfe  
a pinte of sharpe Vineger, warmed blood warme, and powze it  
into his Nostrils, and hold his head well upward, and let  
him

- The Sturdie  
or Daffe.** him bloud at the Nose. If your Bullocke turne round, and  
have the Daffe, you shall take him by the head, and seale up-  
on his forehead, and you shall seale it with your thumbe:  
cut the skinne crossewise right in the place, and wipe away  
the bloud as it doth encrease with a clout, and binde a cloth  
over his head, and keepe it warme. If your Oren pisse bloud,  
keepe them foure and twenty houres from water, and then  
gibe to every one a little dishfull of ternet curds in a quart  
of milke, let them not drinke in foure houres after. There  
sometime runneth a bloud upon the backe of a Bullocke,  
which will make him draw his legs after him, and go as if he  
were swaide in the Chine: cut off a joynt or two of his tayle, and  
let him bleede: if he bleede too much, knit his tayle, or seare it.  
If he have the Panties, he will pant much, and shake in the  
Flanke, and sometime shake doونه: gibe him a little rennet,  
with Swete & Chamberlye. If he swell of the Taint, or Sting,  
woyme, gibe him vyne, salt, and treacle to drinke: if he chanceth  
to have a stroke in the eye, take the iuyce of Smalledge, Fenel,  
and the white of an Egge. The Gargyle is a swelling be-  
side the eye upon the boane, like a Borch, or a Wyle: if your  
Bullocke have it, cut off round about it peeces of skinne as  
broad: then cut also round about those peeces one narrow  
lappe of the skinne, which will keepe the disease from his  
lippes, for if it come to his lippes, it is incurable: Then take  
Chamberly and Salt, and seethe them together, and wash the  
places where the skin is cut off, and wash it therewith evening  
and morning, till the swelling be gone, scraping off the scabs,  
and other filth at every dressing to the quicke, till the swelling  
be gone, not sparing it so long as it watereth and runneth: when  
the swelling is cleane gone, take Parncole and Honey, boyled  
together bloud warme, and anoynt all the said places, which  
will both heale it, & cause the hayre to come againe. We have  
certaine medicines besides, that we use generally for all disea-  
ses: as this, which is very soueraine: Take a handfull of beaks  
Lungwort, a handfull of other Lungwort that serueth for the  
pot, a handfull of inward rinde of Elder, a handfull of Reme,  
chop them small, and put them into a pottle of good Ale, let them  
steethe till they be soft, then straine them, and put in the liquor a  
pennyworth

**For all dis-  
eases,**



peny-worth of long Pepper, a peny-worth of graines, a peny-worth of Liquorise, a peny-worth of Anisseed, a halfe peny-worth of Comen, a peny-worth of Turmericke, all well beaten, and put into the liquoz, with a quarter of a pound of Spadder: and whilst all these doe sath, take a great bole dish; and put therein a handfull of Bay salt, halfe a handfull of Garlick, foure new layd Egges, shels and all, two balls of Ointment, grinde all these things with a Pestle, in the bowle: then take the liquour aforesaid from the fire, till it be halfe cold, and put the warme liquour into the bowle, with the Clovies, Salt, Egges, and Ointment, brew it well together, and give the Beast to drinke blood-warme, or a little more. Another of the same sort is this: Two peny-worth of Comen, a peny-worth of Graines, two peny-worth of Anisseed, a peny-worth of Bay-berries, a peny-worth of Fenecrike, a peny-worth of Turmericke, one ball of Ointment, a peny-worth of Triacle, or rather for the Lungs, thre or foure spoonefuls of Spadder, beate them all together, and put them in thre quarts of drinke, set them on the fire, til they be blood-warme, give the beast, no drinke in the morning before, nor till noone after, in the yow Summer, and in the Winter till night: or if you will, may give them this medicine following: Take Flint softe, that is hard dried upon a post or roose, and beate it into powder with salt, then take running water, and sethe it, ranke Iuie, with the softe and salt, and when the Iuie is soft, take and boyling out the iuyce, and straine all together through a linnen cloth, and give it your cattell to drinke blood-warme, in the Spring, and at the Fall of the lease.

 Diseases of the necke.

If any Dres necke be galled, bruised or swolne with the poake, or if hee have the cloth, take Traine oyle and grinde it with white-lead till it come to a balme and therewith annoynt the sore, and it will not onely heale the grieve, but also so harden the skinne that it will never gall after:

Of misliking.

If a Beast fall into any unnaturall milke or leanenesse, which you shall know both by his shape and the discolouring of his haye, first let him blood, then take of old Urine a quart, and mixe it with a good handfull of Hennis dung, and so give it the beast to drinke.

Impostumes

If a Beast be troubled with any Impostume, Wyle, or Bolech take Lillie roots, and boyle them in a quart of milke till they be soft, so that you may make them like papp, then scalding hot clap them to the greife, and when the Impostume growes soft, lance it with an hot Iron and let out the filth, then heale it up with Tarre, Turpentine and Oyle mixt together.

Griefe in the sinewes.

If your Beast have any griefe in his Synewes, or that they be weake, Sprunke or tender, then take Gallowes and Chick-wade, and boyle them in the dreggs of Ale or in Vinegar with Rytching sae, and very hot apply it to the offended part.

Biting with a mad Dog.

If your beast be bitten with a mad dogge or any other venomous Beast, take Plantaine, and beate it in a morter with Bolearmonia, Sanguis Draconis, Barley meale and the whites of eggs, and Plasterwise lay it unto the soze, renewing it once in foure and twentie houres.

Lice Ticks

Beasts that are bred in Woods, under the drappings of Trees, or in Barraine and unwholesome places, are much subiect to Lice and Ticks and other vermine; to cure which wash all their bodies ouer with strong old Urins wherein hath bene boyled good store of Tobacco, and doe it very warme.

Wormes.

There is nothing killeth wormes, in the Spawe of a Beast so soone as Saven chopt small, and mixt with swete Butter, and so give the Beast, thre or foure prettie big Balls thereof and to keepe him fasting two or thre houres after.

The Goute.

If your Beast be troubled with the Goute, which you shall know by the sodaine swelling of the ioynts, and falling againe, you shall take Galingal and boyle it in the dreggs of Ale with swete Butter, and pulstewise, lay it hot to the offended part.

Of Milking.

Milking is, when a Beast will oft fall, and oft rise as he is at his labour and cannot indure to stand any while together; it proceedeth from some stroake or huise, either by Cudgell or other blunt weapon, and the cure is not to rayse him sodainely, but to give him in a quart of Ale warme, halfe an ounce of Stone Pitch in powder, and as much Spermacete.

Whethberd

A Cowe that is Whethberd, is when after her Caluing she cannot cast her cleaning, and therefore to compell her to cast it, take the iuice of Bettonis, Bugwoozle, and Gallowes of each thre Spoonfulls, and mixe it with a quart of Ale and giue it

if the beast to drinke warme, and also giue her to ease scorched  
Barley, and it will soze her to a boye her burthen soainly.

If your Beast either in travell, or otherwise have received  
any wound either with Thorne or Stubb, and the Thorne or  
stubb remaineth still in the wound: To draw them out  
take Blacke Snayls and Blacke Soape, and beate them to a  
Salve, and apply it to the soze, and it will draw them out.

If any Beast have a Bone broken or misplaced, after you  
have set it right and in his true place, you shall wray a plaster  
about it, made of Burgundie Pitch, Callais and Linsced-oyle;  
then splent it and cover it over with a red-cloath, and let it not  
be stirred or remoued for the space of twentie dayes in which  
time it will knit.

There is nothing doth purge a Beast so Naturally as the  
greene woede-grasse which groweth in Orchards under Trees;  
For any Medicine doth purge them better then Tarre, Butter,  
honey, a little sweete Soape and Sugar-Candie, and given in  
Balls as bigge as an Vrens Egge.

If a Cowe after her Caluing, cannot let downe her Milke,  
you shall giue her a quart of strong Posset Ale mixt with Ani-  
seeds, and Coliander-seeds, beaten to powder, to drinke ebery  
Mornning, and it will not onely make her Milke spring, but also  
increase it wonderfully.

If your Beast be subiect to the Rott, or Rottemesse, which  
you may know by his leanenesse, milke, and continuall scow-  
ring, you shall take Bayberries, beaten to powder, Pirche, Iul-  
leaves, Elder-leaves, and Featherfue, and a good lumpe of drye  
Clay and Bay-salte: mixe these together in strong Urine, and  
being warme giue the Beast a pinte thereof to drinke for sun-  
drie mornings, and it will knit him.

A Shrew-mouffe which is a Spouse with short unben leggs  
and a long head like a Shewnes, is a venomous thing, and if it  
bite a Beast, the soze will swell and ranchle, and put the Beast  
in danger; but if it onely runne over a beast, it webleth his hin-  
der parts and maketh him unable to goe: the Cure then for be-  
ing shrew-bitten is the same which is formerly declared, for  
the biting of a mad dog or venomous Beasts. But if hee be  
shrew-runne, you shall then take out a Bizar or Bumble  
that

that groweth at both ends, and rayling it draw the Beast through the same, then cut up the Bumble and beate the Beast therewith and it is a present remedie. These Wyars are found in the Furrowes where Cyme growes.

The Buffes.

Next to these Cattell I place the Bubale, called of the common people Buffes, Plinie Bisonte, are common in Italy, beyond the Appenin: a wilde and sauge Beast, that for their fiercenesse, are handled with rings of Iron in their noses: of colour blacke, their bodies large and mighty, their leggs well set, and knit very strong: and in respect of their bodie, short, their hornes large, crained, and blacke, their haire small and short, their tayles little: they are in those parts used for carriage, draught, and like uses, as the Ore. Of the milke of this beast are made Cheeses, that about Rome and other places are greatly esteemed. Columella counts them to be strong meate, and heavy of digestion.

Shaepe.

Now next unto the greater sort of Cattell, the chiefe place is to be assigned to Shaepe: yea, if you consider the great commoditie and profit, they are to be preferred before them: for as Oxen serue for the tilling of ground, and necessarie use of men, so is to this poore beast ascribed the safeguard of the body: for the Shaepe both with his skere apparrell vs, and with his milke and wholesome flesh nourish us (as the Poet witnesseth.)

Poore beast, that for defence of man, at first created wast,  
And in thy swelling udder bear'st, the iuyce of dainry tast: (saile  
That with thy fleece keepst off the cold, that should our limbs saf-  
And rather with thy life, then with thy death, doest us auail.

Of Shaepe there are sundry breeds. The rich and a champion Countrey breedeth a large and a great Shaepe: the barren and the clifftie, a reasonable stature: the wilde and the mountaine ground, a small and a toerish Shaepe. The old husband bands did greatly commend the breeds of Milet, Appulia, and Calabrie, and most of all, the breeds of Taranto, next of Parma, and Modena. At this day, for the finenesse of their skere, greatnesse of burthen, largenesse of body, and excellency of perfection

a very

every way are most in price the sheepe of England. Varro counselleth all such as would buy Ewes, to have their chiefe consideration of their age, that they be neither too old, nor too young: the one of them not yet come to it, the other already past profit: but better is that age, whereof there is some hope, then where there followeth nothing but a dead carcasse. Your best is therefore to buy them at two yeres olde, and not to meddle with such as are past thre: their age is to be knowne by their teeth: for the teeth of the olde ones are woyn away: next must you looke, that your Ewe have a large body, deepe wolled, and thicke over all the body, specially about the necke and the head, and good stoe upon the belly: for such as were bare necked and bellied, the old husbands alwayes refused. The necke must be long, the belly large, the legges short, though the sheepe of England be long legged, in some particular places, as in the Marshlands and such like, but not otherwise. The tayle in some Countrey short: in others very long: for in Arabia some have tayles a cubite long, but wonderfull broad: others, (as both Herodotus and Alianus affirme) thre cubits long, so that the Shepheards are forced to tie them up, for being hurt with traying upon the ground. In Egypt a Rams tayle hath bene found to weigh twentie pound and more. The Ramme must have his hornes great, winding inward, and bending to the face, though in some places they have no hornes at all, and yet no better Rammes: the hornes must rather crooke inward then grow straigh up. In some Countreies that are wet & stormy, Goates and Rammes are to be chosen that have the greatest & largest hornes, whereby they may defend their heads from storme and tempest: and therefore in cold and stormie Countreies, the horned Rams are best: in milde and gentle clymates, the pold. Beside, there is this inconuenience, when hee knowes himselfe to be armed, hee will alwaies be fighting, and unruly among his Ewes, and though he be not able to serue the turne himselfe, yet will he suffer no other Ramme in the flocke, till he be even cloyed, and lamed with letchery. The Dollard on the other side, finding himselfe unarmed, is milder and quieter by much: wherefore the Shepheards, to restraine the rage of the unruly,

The choise  
of Ewes.

Rammes.

anruly, doe use to hang before his hoines a little boord with sharpe pikes inward, which keepes him from his madness, while he perceiveth himselfe to be hurt with his owne blood: others say, that if you pierce his hoines with a wimble, next to the eares, where they winde inward, he will leave his bawling. In some places also the Ewes are hoined: but to the Ramme, his eyes must be holene, his eares must be great, his best, shoulders, and buttockes broad, his knees great, his tayle broad, and long: you must looke beside, that his tongue be not blacke, nor peckled, so commonly such will get blacke and pped Lambes, as Virgill noteth:

And though the Ramme in sight be white as snow,  
If blacke within his iawes his tongue be wrought,  
Refuse him quite, lest if he leape thy Ewe,  
He doe infect thy Fold with colour nought.

✂  
To buy  
sheepe.

When you goe about to buy Sheepe for the stocking of any ground, be sure to bring the Sheepe you buy from a worse soile to a better and not from a better to a worse. The leare which is the earth on which the Sheepe lyeth and giveth him his colour, is much to be respected; the Reddeare is held the best, the dusky inclining to a little rednesse is held tollerabile; but the whyle or duntie leare is sturke naught: in the choyse therefore of your Sheepe chuse those which have whole shoves, red inner-lipps and bright eyes; let them be big boned, and deepe walled, the Staple being close and thicke, soft, greasie, well curled, and downe, so that man shall have much adoe to part it with his fingers; These Sheepe beside the bearing of the best burthen are alwayes the best Butchers ware, fard the fattest and sell the dearest. Be sure every yere once, to make your muster, and supply the places of such as are dead, or sick, with a new and a sound number, so that the farder be not deceived with an old unprofitable flocke. The hardnesse and crueltie of the cold Winter, doth oftentimes beguile the shepheard, and destroyeth many of his flocke: whereof (presumming of their strength in the end of the Summer) he had made no supply, and therefore Columella is of opinion, that the age for  
hired

bred ought not to be lesse then three yeres, nor above eight, both  
 because that neither of the ages is mete to be kept : and also  
 that whatsoeuer commeth of an old stock, hath lightly a smacke  
 of his old parents imperfection, and probeth either to be bar-  
 raining or weake. The selfe same Columella would haue the  
 Ewes to be put to the Ramme after they had passed two yeres  
 old, and the Ramme to be of fife yeres old, so after seuen they  
 decay. In many places at this day, they suffer both the kinds to  
 breed from two yeres old, till nine : but before two yeres, it is  
 not good to put either the Ramme or the Ewe to breed, although  
 in most places they suffer the Ewe at a yere old. The Ramme  
 is put by his purpose, by the Tickers, or Bulrushes, tyed to the  
 Ewes taylor, but more commodiously, by going in severall pa-  
 stures : howbeit, they are not commonly severed, but suffered to  
 goe together. The Rammes that you would haue to serue your  
 Ewes, must alsoe their ryding, be kept in good pasture, so two  
 moneths, where by they may be the better able to doe their busi-  
 nesse : but in our Country we commonly suffer them to fede to-  
 gether. To increase their lusts, you shall give them in their  
 pasture the blades of Onions, or knot-Grasse : They rather  
 covet the old Ewes then the young, because they be easier to be  
 entreated, and the Rammes themselves in age be the better.  
 By knitting of the right stone, you shall haue Ewe Lambes,  
 and of the left, Ramme Lambes : also their blossoming in the  
 Northwinde, getteth Ramme Lambes, and in a Southwinde,  
 Ewe Lambes; one Ramme (as Didymus affirmeth) sufficeth  
 for fiftie Ewes : when they have all conceived, the Rammes  
 must againe be banished, so dangering and harming the  
 Ewes. During the time of their blossoming, they are to be  
 watered in one place (as both Varro and Plinie affirme) because  
 the change of water both discoloureth the wolle, and dangereth  
 the Lambe. The policie of Iacob the Patriarch, in procuring  
 of partie coloured Lambes, is well enough knowne. The best  
 time for blossoming, is from the setting of the Bearward, to  
 the setting of the Egge : (as Varro and Columella have written)  
 which is (as Pliny interprets it) from the third Ides of May, till  
 the thirtiene Kalends of August : others thinke it good all the  
 yere long, many preferre the Winter Lambe before those that

fall



When Ewes  
ould bring  
fourth.

fall in the Spring, as a creature that of all others best brooketh his Winter birth. But howsoever these be the opinions of the Ancients, yet this is an infallible rule knowne in our present experience, that the best time of the Ewes to bring forth their Lambs, is (if they be pasture shepe,) about the latter ende of April, and so untill the beginning of June; but if they bee field shepe, that is such as live on the common and on the fallow field, then from the beginning of January till the end of March, that their Lambs may be strong and able before May day, (which is the time of opening the fallow field) to follow their Dammes ovet the lands and the water furrowes, which weake Lambs are not able to doe. And although to yeane thus early, when there is no grasse springing be dangerous, yet the Husbandman must provide Shelter and sweete fodder or else good Winter fog, and the Shepheard with great vigilance must bee sitting at all houres to prevent euils; and though the Ewe at the first be scarce of milke, yet as the warme weather encreaseth and the Grasse beginneth to spring, so will her milke spring also.

The thunder, if the Ewes goe alone makes them cast their Lambs, and therefore it is good to let them go with company for aboiding that perill: they goe with Lambe one hundreth and fiftie daies, or fve monthes: such as are afterward lambed, are feeble and weake, and such were of the old writers called Cordi; for the most part they bring but one Lambe a piece, yet oftentimes two, and if they be well fed, fve at a time. It hath bin scene in Gelderland, that fve Ewes have had in one yere fve and twentie Lambs: it may scene peradventure to many incredible, and yet no great marvaile, since they have twice a yere most times two, and sometime fve at a time. The Shepheard must be as carefull as a Midwife in the yeanning time, for this poore creature (though she be but a Sheepe) is as much tormented in her delibery, as a Sheew, and is oftentimes more dangerously vexed and pained in her labour, in that she is altogether without reason: and therefore it behoveth the Shepheard to be skillful in medicinng of his Cattell, and so cunning a Midwife withall, as if needs require he may helpe his Ewe, what danger soever happen. The Lambe as soone as he is fallen,

fallen, must be set on foote, and put to the Dammes udder; & oftentimes his mouth held open, the milke must be milked in, that he may learne to sucke; but befoze you doe this, you must be sure to milke out the first milke called Colostra, whereof I will speake hereafter: for this, except some quantitie be drawn out, both hurt the Lambe. If the Damme die, you must suckle it with a hohne: if the Lambe will not of himselfe sucke, he must be put to it, and his lips annointed with swete Butter, and swines grease, and seasoned a little with swat milke. As soone as they are lambd, they must be shut up together with their Dammes, whereby both the Damme may cherish them and they learne to know their Dammes. Afterward, when they begin to waie wanton, they must be seuered with Hardelles: or (as Varro writeth) after ten daies they must be tied to little stakes with some gentle stay, for hurting of their ioynts, and waing leane with too much play. The weaker must be seuered from the stronger, for hurting of them: And in the Morning betimes, befoze the flocke goe to pasture, and in the Evening when they be full, the Lambs must be put to their Dammes: and when they waie strong, they must be sed in the house, with Clover, and swete grasse, or else with Branne, and Flowze. And when they have gotten greater strength, they must be let out with their Dammes about none, into some sunny and warme Close nere adioyning. In the meane time, you must not deale with the milking of Ewes, so shall you have them to beate the moze wool, and bring the moze Lambs. When the Lambs are taken from their Dammes, good heed must be had, that they pine not away: and therefore they must be well cherished in their weaning time with good pasture, and well kept, both from cold, and extreame heat. Also after that they have forgotten the udder, that they care not for their dammas, then shall you let them feede with the flocke: howbeit in most places the Lambs are suffered to feede in the flocke together with their dammas, and so sucke till harvest time, till the Dammes themselves doe weane them. Varro would haue you not to geld your Lambs under sixe months old, and that in a season neither too hot, nor too cold: but experience teacheth vs, that the best gelding is under the Damme when they be youngest: for in the elder (as in all other beasts) it is dangerous.

Those

Those that you will keepe for Hammes, you must take from such Cwes as use to have two at one time.

The first yere a male Lambe is called a Weatherhog, and the semall Lambe is called an Cwe-hog; the second yere the Male is a Weather, and the Femall a Cheave, and the she may be put to the Hamme, but if you let her goe over that yere also, then she is called a double Cheave, and will both herselfe be the goodlier sheepe, and also bring forth the goodlier Lambe, whence it comes that the best sheepe-masters make more account of the Double Cheave then of any other breed.

The best pasture for sheepe, is the grasse that is turned up with the Plow, and groweth upon fallowes: the next is that, that groweth in dry Heddwes: the marishy ground is to be refused, and that which groweth nere unto Lakes and Fennes: the plaine and the champion fields and Downes, are best for the delicatest and finest wolled sheepe. To be short, the shorter and finer the Grasse is, the better it is for sheepe: and yet is there no pasture so good, or so fine, but with continuall use your sheepe will be weary of it, except the shepheards remedy this fault with giving them Salt, which (as a sauce to their foode) he must set readie in Summer when they come from pasture, in little troughs of wood, by licking whereof they get them an appetite both to their meate and their drinke. (Aristotle affirmeth) you must in Summer every fift day let them have Salt, a pecke to every hundred: so shall your sheepe be alwaies healthy, ware fat, and yelde you plenty of milke. Moreover, against the Winter rot, or hunger rotte, you must provide to feede them at home in Cratches. They are best fed in the warmest countries, with the leaves and brouings of Elm and Ash, and the Hare that is made after Harvest in the end of Summer, because it is softest, and therefore sweeter than the other.

Pasture for  
sheepe and  
to preserve  
them.

Now for the generall preservation of sheepe, tis good to feede them as much as you can upon high grounds which are drie and fruitfull, the grasse sweeter, yet so short that it must be got with much labour (if they be holding sheepe, but if they be Pasture or fat sheepe, no matter how good the grasse be.) But if you must force perforce feede upon low & moist grounds

which

which are infectious, you shall not bring your sheepe from the fould untill the sunne be risen, and that the Beames begin to draine the dew from the earth, then having let them forth drive them to their place of feede, & there with your Dog, chase them up and downe till they be wearie, and then let them either feede or take their rest, which they please; this chassing first beatech away Felldewes, and all other dewes from the earth, as also those Meebes, Kells and Cobweb-flakes, which lying on the earth and a sheepe licking them up, doe breede rottenesse. Also this chassing stirreth up their naturall heate which drinketh up and wasteth the abundance of moisture, which else would turne to rottennes. Besides, a sheepe being thus chassed & wearied will fall to his feede more deliberately, & not with such greedines as otherwise he would, and also make choyce of that meate which is best for his health: & this rule is no imaginarie thing or precept of the Ancients, but a certaine approved experiment; used by an English shepheard, who in a rot yere having but three hundred sheepe, (by this course) lost not one when thousands died both with him and round about him.

Moreover the shepheard, as also the keeper of all cattell, must deale gently & lovingly with their flock, & comforting, & chering them with singing, and whistling: for the Arabians (as Alianus writeth) do finde, that this kinde of Cattell taketh great delight in Musicke, and that it doth them as much good as their pasture. Beside, they must be well ware in the driving of them, & ruling of them, that they guide them with their voice, and shaking of their staffe, not hurting, nor hurling any thing at them, nor that they be at any time farre off from them, and that they neither lye nor sit: for if they go not forward, they must stand: for it is the shepheards office to stand allwayes as high as he can, that he may plainely & easily discern, that neither the slow nor the great belved in lambing time, nor the quicke, nor the lively, while they roame, be severed from their fellows: and least some thiefe, or wilde beast beguile the negligent shepheard of his cattell. Of their pasturing, I thinke I have spoken sheepe sufficiently; and therefore I meane now to shew you of their houses, or sheepecoats, whereof there ought to be a speciall regard, that they be conveniently placed, not subiect to winde, nor  
S
skymes,

Roymes, and that they rather stand toward the East, then toward the South. Columella would have them built low, and rather long then broad, that they may be warme in the Winter, and that the straightnesse of the roome hurt not the young. And beside, he would have them stand toward the South: for this beast (though his garments be warme) cannot away with cold weath'r, neither yet with the great heate of the Summer. I have sene some sheepe-houses so framed, as they have had their gates toward the South and toward the East, that they might answer to the seasons of the yere. Columella would have the House set towards the South, and on the backe-side a close Pastures, where they may safely take the ayre. You must looke besides, that where they stand, the ground be made sayre and even, something hanging, that it may be cleane kept, and that the vyne may be well voyded away: for the wetnesse here, of both not onely hurt, and corrupt their fete, but also spoyleth their coates, and maketh them russe and ill favoured. Let there be no moysture therefoze, but alwayes well strewed with dyme serne, or strawe, that the Cwes that be with young may lye the softer and cleaner. Let their beds be very cleane; for the cleaner they lye, the better they feed: let them in any wise be wel fed, for a small number (as I said befoze) well fed, yelde more profit to their Master, then a great flocke barely kept. You must also have severall partitions to keepe the weaker and the sicke, from the strong and unsuly.

And thus much of housed sheepe, that are every day brought home: but in some places they are kept abroad, farre from either towne or house, in Forrests, and open wilde fields and downes: in these places the Shepheard carryeth with him his Wardles, and his Nets, and other necessities to his flocke withall. In the desert fields, when as the Winter Pastures, and the Summer Pastures are distant certaine miles asunder (as Varro saith) he would have the flocks that have wintred in Apulia, to be kept in Summer upon the Mountaines of Kie: and Virgill thus writeth of the Shepheards of Lybia:

What

What should I here of *Lybian* Shepheards tell,  
 Or of their Pastures write, and dwellings poore,  
 That night and day on Downes, and Desarts dwell,  
 Where wanders still the Flocke without the doore :  
 And on the ground doth lye the Shepheard here,  
 While he removes with him continually  
 His house, and all his household goods doth beare,  
 His staffe, his dogge, and all his armory ?

The like have I my selfe sene in *Swytzerland*, and other  
 places of Germany, where the Shepheard, lying still abroad  
 with his flocke, folds his sheepe in the night with Wardles,  
 tying their dogges about them for watchmen : the Shepheard  
 himselfe in a little house upon wheeles, sleepes hard by his  
 charge. The sheepe of Greece, Asia, and Toranto, and those which  
 they call, Covered sheepe, are commonly used to be kept in  
 houses, rather then abroad, for the excellencie and finenesse of  
 their wooll.

The times of shearing, are in all places one, but varie, ac-  
 cording to the disposition of the ayre, the cattell, and the coun-  
 trey : the best way is to have good regard to the weather, as the  
 sheepe be not hurt by shearing in the cold, nor harmed by for-  
 bearing in the heate. In some places they have two seasons in  
 the yere for shearing of their sheepe : the first season for their  
 shearing, is either with the beginning of May, or else with the  
 ending of Aprill : the second season of their shearing, is about  
 the beginning of September. Such as doe use to sheare their  
 sheepe but once in the yere, doe commonly appoint for their season  
 the tenth of the Moneth of June : about which time also such as  
 doe sheare twice a yere, doe sheare their Lambes.

But the best sheepe-masters doe not allow the shearing of  
 Lambes till they be a full yere old and be called Hoggs. Three  
 dayes before you sheare them, you must wash them well, and  
 when they be full dyed, you may sheare them : they doe not in  
 all places sheare their sheepe, but in some places ( as *Plinio*  
 saith ) pull them. The old Husbands did account for the best

Wool, the Wool of Puglia, and that which in Italy was called the Græke Flæce: the next in goodnesse they tooke to be the Wool of Italy: in the third place they esteemed the Milesian Flæce: the Wool of Puglia is but short, and meete to be woyned onely in riding Cloakes. The wool about Taranto, and Cannas, is thought to be passing good: but the best at this day is the wool of England. The finer your Pasture is, the finer (as it is thought) you shall have your wool. The wool of such sheepe as are slaine by the Wolfe, and the garments made thereof, (as Aristotle saith) are aptest to breede Lice. If you happen in the shearing to clip the skinae, you must forthwith annoint it with Tarre: when you have shorne them, some thinke it good you anoynt them with the iuyce of sodden Lupines, Lees of old Wine, and the dregges of Dyle made in an oymntment: & after thre daies to wash them (if it be nere you) in the Sea, or if the Sea be farre off, with raine water, sodden with Salt. And being thus ordered, you shall not have them to lose their wool all the yere, but to be healthie, and to carry a deepe and a fine flæce.

There be some again, that would have you to annoint them thre daies in the yere, the daies being sone after you have washed them with Dyle, & Wine mingled together. Against serpents, that many times lie hid under their cribs, you must burne Cedar, Galbanum, or womans Hayre, or Harts hoine: in the end of Summer is your time for drawing & sebering of them (as I told you before) when you must sell your sheepe, that through feblenes, they saile not in the winter. Beside, killing one or two of them, you must looke well upon their Livers, and if the Liver be not sound (for thereby is foresene the danger) then either sell them, or fat them, and kill them: for very hard it is to save them their Livers being perished. Infected sheepe are moze subject to Scabbes and Painingesse then any other Cattell,

Or if you wash not off the sweat of the Summer with salt water: or otherwise, if when they be shorne, you suffer them to be hurt with brambles, or thornes: or if you put them into houses, where either Horses, Mules, or Asses have stode: but specially lacke of good feeding, whereof proceedeth pozenesse,  
and



and of pozenelle scabbes and manginelle. The shepe that is infected is thus knowne. If he either scratch, stampe with his foote, or beate himselfe with his hozne, or rub himselfe against a tree: which perceiuing him so to doe, you shall take him, and opening his wooll you shall finde the skinne russe, and as it were itchie. Diuers men haue diuers remedies for this maladie.

Constantine out of Dydimus affirmeth, that the scabbes of shepe are healed by washing them with vyne, and after anointing them with Wyimstone and Oyle. The common Shepheards, when they perceiue a shepe to fall a rubbing, they straightwaies take him, and shodding the hayze, do seare the place with Tarre: others doe teach other remedies, more hard to come by, which are not for every Shepheard, nor every Countrey to use. And if the whole flocke be infected, it doth many times so continue, as it shall be needfull to change houses, and (which in all other diseases becometh) both Countrey and ayre.

Now befoze I proceed any further into their infirmities, I will shew you the signes how to know a sound shepe from an unsound, as thus. If a shepe be sounde and perfit, his eyes will be bright and chearefull, the white pure without spots, and the strings red, his Gummes also will be red, his Teeth white and even, his skinne on his Brisket or Brest will be red, and so will each side; betwixt his Body and his Shouldeer where the Wooll growes not, his skinne in generall will be loose; his wooll fast, his Breath long, and his fate not hot. But if he be unsound, then these signes will haue contrarie faces, his Eyes will be heauie, pale and spotted, his Brest and Gums white, his Teeth yellow and foule, his Wooll when it is pulled will easily part from his Bodie: and (as befoze was sayd) when he is dead open him, and you shall finde his Belly full of water, his Suet yellow, his Liver putrefied, & his flesh moist and waterish; Now for their preseruation.

This one alone medicine haue I alwayes proued for the keeping in health of this cattell, to be most present & soveraigne: Take the berries of Juniper, beate them small, and sprinkle them with Dates and Salt, mingle them all together, and

How to know a sound shepe.

To preserve Health.

gibe it your Sheepe thre or foure times in the yere: for though they refuse to eate the Juniper berries of themselves, yet for the desire of the Salt and the Dates, they will easily take them all together. If they be lowlie, or full of Tickle, they vse to beate the rotes of Maple, and seething them in water, and opening the wooll with their fingers, they poure the liquour, so as from the ridge of the backs, it run over the body. Others vse the roote of Spandzake, being well ware that they suffer them not to taste it. If they have the Fever, you must let them blood in the heele, betwixt the two Clées, which the Poet teacheth, saying:

It easeth straight the flaming feavers paine,  
If in the soote you strike the spinning veine.

Some let them blood under the eies, and some behind the eares. The fowle, a disease betwixt the Clées, is taken away with Tarre, Allome, Brimstone, and Vineger, mingled together: or powder of Verdigrease put it. The swelling betwixt the two Clées, must be cut with great warinesse, least you hap to cut the worrne that lieth in it, for if you do, there commeth from her a hurtfull matter, that poysoneth the wound, and maketh it uncreable. Master Fitzherbert, a Gentleman of Northamptonshire, who was the first that attempted to write of Husbandry in England, appointeth this cure: his words be these. There be some Sheepe that have a worrne in his scote, that maketh him to halt, take that Sheepe, and looke betwixt his Clées, and there you shall finde a little hole, as much as a great pins head, wherein groweth five or sixe blacke hayres, like an inch long, or more: take a sharpe pointed knife, and slit the skinne a quarter of an inch long aboue the hole, and as much beneath; and put thy one hand in the hollow of the scote, under the hinder Clée, and set thy thumbe aboue, almost at the slit, and thrust thy finger underneath forward, and with your other hand, take the blacke haire by the end, or with thy knives point, and pulling the haire a little and a little, thrust after thy other hand, with thy finger and thy thumbe, and there

For Lice.

The Fever.

The Fowle

Worne in  
the Foote.

Master  
Fitzherbert  
for curing  
of sheepe.

there will come out a woyme, like a p[er]ce of flesh, n[er]e  
 as bigge as a little finger: when it is out, put a little Tar  
 in the hole, and it will shortly mend. If they happen by  
 the extreame heat of the Sunne to fall downe, and to foake  
 their meat, give them the iuice of the wilde Bete, and cause  
 them beside to eate the Bets. If they hardly draw their  
 breath, sit their eares, and let them bleed. If they be trou-  
 bled with the Cough, Almonds beaten with Wine, & powred  
 a prettie quantitie into their nostrils, remedieth them. A  
 Sheepe, or Swine, that hath the Purraine of the Lungs,  
 you shall helpe by thrusting through their eare, the rose of  
 Betterwort: this sicknesse doth commonly spring of want  
 and scaritie of water, and therefore (in Summer time  
 specially) you must suffer no kinde of Cattell to want wa-  
 ter. Their legges, if they happen to be broken, are to bee  
 cured in like sort as mens be, being wrapped first in wax  
 dipped in Oyle, and Wine, and afterward splented. The  
 young Lambes, and other Sheepe, also while they goe a-  
 broad, are troubled with scabs and manginess about their  
 lippes, which they get by feeding upon dewie grasse: the  
 remedie is Hysope and Salt, of each a like quantitie beaten  
 together, and their mouthes, their pallats, and their lippes  
 rubbed withall: the Ulcerous places must bee annointed  
 with Vineger, Tarre, and Swines grease. If they chance  
 to swell with eating of any Woyme, or venemous grasse,  
 you shall let them blood in the veines about the lippes, and  
 under the tayle, and after powze into them Chamberlye.  
 If they happen to swallow a Hoxeleech, powze into them  
 strong and tart Vineger warme, or Oyle. Against the  
 Purrrion, or the Rot, I have sene given them, certaine  
 spoonfulls of Wine, and after a little Tarre: this medi-  
 cine was used by Master Iohn Frankloe of Chart in Kent,  
 who was in his life time a skilfull husband, and a good  
 housekeeper. In like sort have I sene this medicine: Take  
 for every foze, one penyworth of Triacle, and likewise one  
 little handfull of Hempsede, ground Iule, Elderleaves, and  
 Featherfew, as much as a Tennisball of Loame, and as  
 much Bay salt, put thereto Chamberlie, and a little Bote,

Contagion  
from the  
Suns heate,

The cough.

The Mur-  
raine of the  
Lungs.

Broken-  
bones.

Lambes.

Eating  
woorm  
or veno-  
mous grasse,

Master  
Iohn Frank-  
loe.

make it all luke-warme, and give to every one thre spoon-fuls good, and after every one a little Larre, before they go out of hand. In some places they use to take the dried Solives of Wormewood, and mingling them with Salt, they give them to their Sheepe, as a generall medicine against all diseases. This medicine is commended by Hieronimus Tragus, both for awa-ying of any paine, and driving away any hurtfull disease from Cattell.

  
The Red  
water.

The Redd-water is a most poysonous disease in Sheepe, of- fending the heart, and is indeed as the Pestilence amongst o- ther Cattell; therefore when you finde any of your Sheepe in- fected therewith, you shall first let him blood in the foote betwixke the Claws and also under the tayle, and then lay on the soze places Kewe and Wormewood beaten with Bay salt, and it helpeth.

The Wild-  
fire.

This disease which is called the Wildefire is a verie infectious sicknesse, and will indanger the whole flocke; but howsoever incurable it is held, it is certaine that if you take Chervile and stamping it withold Ale, make a Salve there- of and annoynt the soze therewith, it will kill the fire and set the Sheepe safe. And though some for this disease, bury the first infected Sheepe alive with his heales upward before the Sheepe-coate doze, yet this medicine hath bene ever found more effectuall and more agreeing with Reason.

Sore eyes.

If your Sheepe have any imperfection in his eyes, you shall drop the Juice of Belladine into them, or else take a leafe of Ground Iuie, and chawing it in your mouth spit the Iuie into the Sheepes eye, and it is a present Remedie.

Of Tagged  
or Bell.

A Sheepe is sayd to be Tagged or Bell, when by a conti- nuall sure or running out of his ordure, he betrayeth his tayle in such wise that though the heate of his dung it scaldeth and breedeth the scabbe therein; The Cure is, first with a payze of Sheares to cut away the Taggs, and to lay the soze bare, and rase, and then to throw earth dried upon it, and after that Tarre and Goose-grease mixt well together, then lastly to throw on more earth; and it is a present helpe.

The Poxe.

The Poxe in Sheepe are small red pimples, like Purple; rising

in the skinne, and they are very infectious; the Cure is to take Rosemarie and boyle the leaues in Vinegar, and bath the sores therewith, & it will heale them: change of Pasture is good for this disease, and you shall also separate the sicke from the sound.

If an Ewe grow unnaturall and will not take her Lambe after she hath yeaned it, you shall take a little of the Cleane of the Ewe, which is the bed in which the Lambe lay, and force the Ewe to eate it or at least to chew it in her mouth, and she will fall to love it naturally. But if an Ewe have cast her Lambe, and you would have her take to another Ewes Lambe, you shall take the Lambe that is dead, and with it rubb and daube the liue Lambe all over, and so put it to the Ewe, and she will take as naturally to it as if it were her owne.

Of unnaturallnesse.

Thus having shewed you these Cures, I will now giue some especiall precepts fit for every Shepheard, and so procede to the Goate; know then it is mete for every Shepheard to understand what soeue is good for Sheepe, and what hurtfull, that following the one and eschewing the other, he may ever keepe his Cattell in health. The Grasse which is most wholesome for Sheepe is that which hath growing in it good store of Pellilot, Claber, Selse-heale, Cinquefoile, Broom, Prinpernell and white Penbane. The grasse which is unwholesome for Sheepe is that which hath growing amongst it Spearewozte, Penny-grasse and any weede that growes from inundations or overflowes of water, also Knotgrasse and Bellweid grasse.

Precepts for Shepherds.

Of all Rotts the hunger Rot is the worst; for it both putrifieth the flesh and skinne, and is most incident to field Sheepe, for to Pasture Sheepe it never hapneth; The next rot is the Belt-rot which cometh by great store of Raine immediately after the Shearing, which Belldewing the skin corrupteth the flesh, and this also is most incident to field Sheepe which want shelter.

There be little white Snails (without Shells) which a Sheepe will liue up, and they quickly rot them. There will grow upon an Ewes teates little bay Rabbits which will suck their milke when the Lambes suck; the Shepheard must have care to pull them away: A Sheepe will have a Bladder of water under his Cheeke which the Shepheard must be carefull to let out & lance, or the Sheepe will not prosper.

It is not good to sheare sheepe before Midsummer, for the more he sweateth in his Woolle, the better and more kindly it is.

If you will know the Age of a sheepe looke in his mouth, & when he is one sheare he will have two broad teeth before; when he is two sheare, he will have foure broad Teeth before, when he is thre he will have sixe, and when he is foure sheare he will have eight, & after those yeres his mouth will begin to breake. Now touching the rule of ebernesse and unebernesse of the mouth, it is uncertaine and faileth upon many occasions.

Goats,

Goates have many things common with sheep: for they go to Bucke at one time, and go as long with yong, as sheepe do: they yeld commoditie with their flesh, their milk, their Cheese their Skins, and their Hay: the Haire is profitable to make Ropes of, and Patches, and divers like instruments belonging to Sea-men, by reason that it neither rots with moisture, nor is easily burnt with fire. Varro maketh mention of two sorts of them, a heary sort, & a smooth. Such as have Wermes, or Wartes, under their chinnes, are taken to be most fruitfull: their Widders would be great, their Spilke thick, & the quantity much. The he Goate would be softer hayed, & longer, his specke short, his Throat-bell deeper, his Legges fleshy, his Eares great and hanging: it is thought better to buy the whole flocke together, then to buy them severally. At the Chinne of every one of them hangeth a long beard, by which, if any man draw one of them out of the flocke, the whole flocke (as amazed) stand gazing upon him. The he Goate, because of his beard, & as (Alianus sayth) by a certaine instinct of Nature, preferring the male before the female, goeth alwaies before his woman. The bargaining for this Cattell, is not after the manner of bargaining for sheepe: for no wise man wil promise that they be free from sicknesse, being as they be, never without the Ague: but he assures them that they be wel to day, & can drinke. One thing is to be woondered at in this beast, that he draweth not his winde as all other beasts do at his Nose but at his Eares. The best kinds of them, are those that bring forth twise a yere, and such you must take for your breede. The Goate is able to engender at seven moneths old, being even as lecherous as may be: for while he is yet sucking, he will lie upon the backe of his damme: and therefore he is called, & unable

unable befoze he be five yeres olde, being not solde and consu-  
med with his overtymely lustinesse of his youth: and therefore  
after he come to be five yere old, he is no longer to serue your  
turne for breede. The time when you shall suffer them to goe  
to rutte, is in Autumne, a little befoze December, that at the  
comming of the Spring, and blossoming of the trees, the young  
may be brought forth. The Goate goeth with youe (as I  
said) five moneths, as the Sheepe doth: she brings forth com-  
monly two, and sometime five (as Plinie witnesseth.) Such  
as beare twise, you must keepe for your stocke, for the renewing  
thereof, and the encrease. As touching their breeding, you must  
in the ende of Autumne sever your hee Goates. The young  
Goates of a yere olde, and two yeres, bring forth kiddes:  
but (as Columella saith) they are not to be suffered to bring  
them up, except they be three yere old: and therefore you must  
away with the young, that the Goates of the first yere may  
breede: and suffer the kiddes of a two yeres Damme, to  
sucke no longer then it is mete to bee solde. When the  
kiddes are brought forth, they must be brought up in like  
sort as I told you of the Lambes: saving that the wan-  
tomesse of the kiddes is more to be restrained and heebler  
to be kept in, and must bee fedde beside their milke, with  
young bolwes. Plinie affirmeth, that they be scarce good breede  
at three yeres olde, but if they passe foure, they be starke  
naught, and that they begin at seven moneths, euen while  
they be under the mothers breast. The first riding pro-  
fereth not, the second is somewhat to the purpose, the third  
breedeth, she brings forth, till she be eight yeres olde, and  
therefore the shee Goats, when they be above eight yeres,  
is not to be kept: for she then becommeth barraine. Those  
which want hornes, (as in the male kindes) of all others be  
the best: for the horned, by reason of their weapons are hurt-  
full and unruly. Besides, the female of such as lacke hornes,  
doe giue alwaies greater plentie of milke: but Columella  
(as he commendeth the Dollardes in a temperate and  
milde Countrey) so in a boysterous and a stormie Region  
he would haue them horned. Such as haue hornes, doe shew  
their age by the circles of their hornes: it is thought, that  
they



they see as well by night, as by day, and that they alwaies lay their faces turned one from the other, & in that order also feede. Cold (as it is said) is very hurtfull to this kinde of Cattell, especially to those that be with yong, as likewise the extreame heat. The wit of this beast Nurius reporteth, he once had experience of, whereas a couple of them chanced to meete upon a very long and narrow Bridge, and the straightnesse would not suffer them to turne, and to go backward blindfold in such a straight, considering the swiftnesse of the streame under them, was more impossible; the one of them lying downe, the other passed over his body. Varro doth commend sundry little flockes kept severall, rather then great flocks together, using for example one Gaberius, because a great flocke is sooner subiect to the Purraine, thinking fiftie to be enough for one flocke. Columella also affirmeth, that there ought not to goe above one hundred of them together, whereas of sheepe he alloweth a thousand in one flocke. The biting or buisling of them, is payson to all kinde of Trees, & therefore were they in olde time sacrificed to Bacchus, because they were so hurtfull to Vines. Their stables Columella would have to stand upon a stonie ground, or else to be paved, for this beast needeth nothing under him but a few boughes. When he lieth abroad, the Goat-head must often sweepe and make cleane their houses, not suffering any dung, or moysture to remaine in them, that may be hurtfull to the flocke: so as I said before, they are seldom without feavers, and much subiect to the Pestilence. And whereas other Cattell, when they have the Purraine amongst them, as soone as they be infected, begin to languish, and pine away: only these Goates as soone as they be taken, though they be never so lustie to Lake upon, suddenly fall downe together, and die as thicke as Haile: which disease doth chiefly happen, by too much ranknesse of Pasture. And therefore as soone as you perceiue one or two of them fall downe, let the whole flocke blood with as much speed as you may, and suffer them not to feed all the day, but shut them up the foure middle houres of the day. If they be diseased with any other sicknesse, you must give them the Rootes of Ruedes, and of the great white Thistle, Ramping them with yron pestles, and strained with raine water let them  
 drink

winke it : and if so be this medicine heale them not : your best will be to sell them, or to kill them, and powder them; and when you buy new, bring them not home too hastily, till the disposition of the ayre be altered. If they fall febrilely sicke, cure them in such sort as you doe your Sheepe. Florentius saith, if you stampe with water the guisard of the Stoik, and give them to drinke a spoonefull a peece, it preserveth both Sheepe & Goats from all murraine and pestilence.

Now seeing that of this Cattell whereof I have entreated, the profit of the Milke is not small, it is no great reason we should overpasse the ordering of the same : for Milke ( as Varro saith ) of all liquid things wherewith we feede, is the greatest nourisher. Milke differeth in goodnesse according to the nature of the bodies that give it : as the Milke of Women, of Iaine, Sheepe, Goates, Ases, Hares, and Cammels : the greatest nourisher is Woman Milke, the next Goates Milke, whersby the Poets saine, that their God Iupiter himselfe was nursed with Goates Milke : the swaetest next Womans Milke, is the Cammels Milke : the wholesomest is Ases Milke, the Asse as soone as he is with Colt, giveth milke : the Cow, never till she hath calued : most comfortable to the stomacke is Goats milke, because he rather feedeth on Bruts and Bowes, than upon Grasse. Cow Milke is most medicinable, and most of all loseth the belly. Shepes Milke is swaeter, and nourisheth moze, but is not so good for the stomacke, by reason it is fatter and grosser. All Milke that is milked in Spring time, is watrisher then the milke of Summer, as likewise is the milke of yong Cattell.

All milke generally ( as Dioscorides writeth ) is of good nourishment, but filleth the stomacke and the belly with winde : that which is milked in the Spring, is thinnest but loseth the belly most. The difference of milke, is taken ( as Varro saith ) of the pastures, the nature of the Cattell, and the milking. Of the pasture, when the cattell is fed with Barly-Straw, and all other, hard and dry meates, and this greatly nourisheth. For purging of the belly, the grasse pastures, specially where the cattell feed of purging hearbes, as Cardanus in his booke de Plantis teacheth, that if you will purge Melancholy, you must feede your milch Goate, or Asse, with Polipodi, and for all other humours

Scene,

Sene, for the Droppe with Spurge, or Agaricke: for cleansing of the  
 Wound, with Fennitox, or Hoppes: and if you will but onely lose  
 the belly, with Mercury, or Gallowes: so farre Cardanus. The  
 collictynen doe chiefly commend for milke, the Pastures  
 where groweth Sperey, and Claber-grasse, & that is all bedeckt  
 with yellow flowers. For the Cattell, the difference is betwixt  
 the Aske and the healthie, the young, and the olde: and for the  
 milke, that is best that is not long kept after the milking, nor  
 that is milked immediately upon the Calving, a grosse un-  
 wholesome kinde of Milke. To trie whether Milke be mingled  
 or not, you shall take a sharpe Rush, & putting it into the Milke,  
 let it drop from thence upon your Paile, and if the drop runne  
 abroad, it is a signe there is water in it: if it kepe together, it  
 shewes it to be pure and good. Of Milke is made Butter, whose  
 use (though it be chiefly at this day among the Flemings) is  
 yet a good and profitable sode in other Countries, and much  
 used of our olde Fathers, yea even of the very Patriarches (as  
 the Scriptures witnesseth.) The commoditie thereof, besides  
 many other, is the allwaging of hunger, and the preserving of  
 strength: it is made in this sort. The Milke, as soone as it is  
 milked, is put out of the Paile into Bowles, or Pannes, the  
 best are earthen Pannes, and those rather broad then deepe: this  
 done, the second, or the third day, the creame that swimmes a-  
 loft is sketted off, & put into a vessell rather deepe then big, round  
 and Cilinder fashion: although in some places, they have other  
 kinde of Charmes, low and flat, wherein with often beating &  
 moving up and downe, they so shake the Milke, as they sever the  
 thinnest part off from the thicke, which at the first, gathers to-  
 gether in little crombles, and after with the continuance of the  
 violent moving, commeth to a whole wedge, or cake: thus it is  
 taken out, and either eaten fresh, or barrellled with salt. The  
 Buttermilke that remaineth of the Butter, is eyther kept for  
 the family, or given to Calves and Hogs, as a dainty food.  
 Cheese is also made of the Milke of Cattell, the Milke being  
 powred into a Vessell of earth, putting into it a little rennet, the  
 quantity of a Walnut, in a great vessell of Milke, whereby it  
 runneth into Curds. Varro doth better like the Rennet of the  
 Leuret, or the Kid, then the Lambes: howbeit, we commonly  
 use

Butter.

Cheese.

use the Calves Rennet : others use sundrie other meanes, such  
with beate, beaming it in a Tine vessels, and after dipping  
those vessels in cold water, which is the sweetest and cleaneest  
manner : others put in the sides of wilde Pastors, and being so  
turned, the Whey doth greatly purge the same : others againe use  
the Milke of the Fig tree, and then both the Whey purge both  
choler and flame : some purge it with Drimell, or scyrpe of  
Vineger, which is of all other wayes the wholesomest : some  
besides, use the little skinne of Birds Gulsards, and others, the  
flowres of wilde Thistles, or Partichokes. The newer and  
better the Milke is, the better will be the Cheese : so made of  
two sorts of Milke, or Milke that is too nere skated, it some  
sourgeth, and wareth hard and naught, and is not so endure any  
while. Again, being made of fat and new Milke, it will very  
long endure, and long continueth in his fatnesse and softnesse :  
about a two or thre houres after you have put in your Rennet,  
the Milke cometh to a Curd, which is straight wayes put in  
to flames, or Cheese fats, and pressed : or if they be but small,  
they are onely pressed with the hand. If they be of any quantity,  
they have great waight upon them : it is very needfull you presse  
out the Whey with as much speed as you can, and so sebet it  
from the Curd, and not to let it lye slowly drayning of it selfe.  
Those that make great Cheeses, have moulds so : the purpose,  
and waights and presses answerable. After this, they take  
them out of the Presse, and lay them upon Herdels, or faire  
smooth Tables, in a shadowie and a cold place, and close from  
all windes, sprinkling them all over with salt, that they may  
sweate out all their sowzenesse, laying them so, as they touch  
not one the other. When they be now well hardened and thick-  
ned, they are taken up, and pressed againe, with great weights,  
and rubbed over with parched salt, and after layd in presse a-  
gaine, whereby it is thought they will neither have eyes, nor  
be over dype : which faults hapneth to come when they be either  
not well pressed, or too much salted. Some use to put into the  
bottom of their Dailles, the graine kernels of the Pine Apple,  
and milking into them, doe cause it so to turne. You may also  
cause your Cheese to relish of whatsoeuer you will, as Pepper  
or any other Spice : but Columella counts that so : the best  
Cheese,

**Cheese**, that hath least mixture in it. The strongest Cheese, and hardest of digestion, are those that are made of Buffes milke: yett are such as are made of the milke of Cows, but the mildest, and lightest of digestion, are those that are made of Goates milke: the Cheese that is made of Mares milke, is of the same qualitie that the Buffes Cheese is. There is Cheese also made of Cammels milke, and of Ases milke: the Cheeses that are made of Buffes milke, are at Rome, of all other cattell in greatest estimation. Such as are touched both above and beneath, and have more then foure Pappes, you can make no Cheese of their milke, for it will never Curd. In our daies, the best Cheeses are counted the Parmasines, made about the River of Po, esteemed for their greatnesse, and daintinesse, of which you shall have brought into other countries that weigh above threescore pound. Next are commended the Holland Cheese, the Cheese of Normandie, and the English Cheese. In England the best Cheese is the Cheshire, and the Shropshire, then the Banbury Cheese, next the Suffolke, and the Essex Cheese, and the very worst the Kentish Cheese.

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Of the whey which commeth from the Cheese is made certaine Curds which are called Whey Curds, & are made in this manner. They put the Whey into a Brass Kettle or Pan and set it over a soft fire, heating it till the fatnesse of the Cheese swimme aloft, then with a Dish they put new milke into the Whey, and presentlie you shall see the Curds swim aloft upon the Whey; which with a Skimmer you shall take and put into a cleane vessell, and so doe as long as you see the Curds arise, then when they cease, put in more new Milke and more Curds will arise, and thus do till the strength of the Whey be spent. The old writers do teach the making of a kinde of white meat, not much unlike to Melcurds, which they called Melcan, & made it in this sort. They put into a new earthen vessell Vineger, and suffered it to boyle softly upon the fire, till the vessell had drunk up the Vineger, and into that vessell they powred in Milke, and set it where it might stand stedfast, where by they had within a while their desire. But we thinketh I have spoken enough of this subject, I wil now proceed to the nature & ordering of Swine which that it is a notable Creature belonging to husbandry, doth evidently,

Melcan,

Swine.

evidently appeare by the saying of 5 ancient husbandes, counting him a slothfull & an unthriftie husband, that hath his Bacon rather from the Butcher, then fro his own Mother: there ariseth as great profit many times to us of our own Swine, as doth to you that be keepers of greatestt cattel of your flocks: for if Bacon be away, the chiefeft supporter of the Husbandmans hitchin is wanting. And whereas Swines flesh seemeth abhominable to 5 foolish Jewes, I beleue verily they never tasted the Gamondas of France, so highly comended by Varro, Strabo, Athenues and other learned writers: which I suppose were none other but the hitches of Melitaphy, so greatly esteemed at this day, not onely in Germany, but in Rome, & that they were called by the names of Celtick Gamonds, because the old writers, especially 5 Greeks called all Countries on this side the Alpes, both French and Dutch, by the name of Celtick. Surely there is no beast besides that makes more dainty dishes, there is in him more fittie different tastes, where every other beast hath but one, & herof came at the first the sharpe law of the Censors, forbidding it to be used at suppers, the Waders, the Stones, the Tripes, and the forepart of the heads of Swine, (as Plinie witnesseth.) And most apparent it is, that not only the French, & the Dutch in those dates; but also the Italians, and the Greeks, nourished great herds of Swine. Among the Greeks, Homer maketh mention of one, that had twelve Dogstyes, every sty containing fittie Workings, & Polybius writeth of more then a thousand to be ready at a time among the ancient Italians, Tuskans, & French. Varro accounteth a hundred but a smal herd. Who so will nourish hogs, must have regard both to the faireness, & the age. Varro adviseth best the nature, the kind & the country. And because the young do commonly resembled their parents, he would have you chose such as are faire, & large bodied, and which makes most to the matter, as fruitfull as may be: which Varro, doth chiefly sheweth those that be of one colour, their harkles would be thicker & blacker, if it be in a cold country: if in a temperate, you may nourish the smooth. Their proportion would be long, large breasted, & bellied, wide buttocked, short legged, & scoted, big necked, & incl. drawned that croined, & turning upward, his tails be inbales. The hinde is most commended, that bringeth many Pigs, the country that

breedeth large and great: the best age for the Boare, is a yere  
 old, though at halfe a yere old they are able to serue a Sow: one  
 Boare is enough for ten Sows, & more. The Sow is sufficient  
 to bring Pigs at a yere old, & so for seven yere after, the fruit-  
 fuller she is, the sooner she beareth old: at the first farrowing, you  
 shall easily see what number she will bring forth: she will not  
 much differ in the other. The best kinde of Sows have twelve  
 pappes, the common but ten, or not so many. Every Pigge doth  
 know his own Pap that he was borne too, and sucketh only that,  
 & none other: if you take away the Pig, the Pap dyeth, as both  
 Plinie, & experience sheweth. They were wont to be bought and  
 bargained for in this sort. Doe you warrant that these Swine  
 are sound, that I shall well enjoy them, that you will answer the  
 faults, & that they be of a healthy breede: A wet moorish ground,  
 is meetest for this Cattell, for he delighteth not in water, but in  
 dirt and mire, so much (as Vatro writeth,) that the Swolfe, as  
 soone as he hath caught a Sow, draggeth her to the water, be-  
 cause hither he is not able to abide the heat of her flesh. And al-  
 though this beast will away with any ground, (for he feedeth  
 both in mountaines, champion, & marish,) yet his chiefe delight  
 is in the woods that is full of quagmires, where there groweth  
 hazel of Oke, Crabbe, Birch, Hawthorne, wilde Olives, wilde  
 Dates, Pastinacks, Crab trees, Plome trees, and Cherrie trees:  
 for these beete fruit at diuers times, and feed the Beards almost  
 all the whole yere. Either of a Hartish is to be preferred before  
 a boe ground, that they may mangle in the marish, dig up toymes,  
 Wallows in the ways, & fumble in the puddles of water, which in  
 summer is most needfull. They also hunt after cootes, specially  
 fenne cootes, & the cootes of Buttriches, Kithes, & Heroges, be the  
 good grasse well fed with a Swine, & Richards of Cherries, Plums  
 Apples, & such a sort withstanding all this, the Worme, for you  
 shall see them often by hand, when meate failes abroad: and  
 therefore you must provide store of Heroges, in Cabbages in the  
 winter, & upon such like flowers; also Beanes, Pease, & Tares  
 will begethen them, and not so much as Winter spares: so this  
 kinde of feeding doth make them fat, and not onely fete them  
 but giveth the flesh a pleasant taste. And the Swine and the  
 Boar, when they are holding a Sow, grow large of time, as

from



## entresting of Cattell.

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from the first, Whey, Buttermilk, washing of Whey into milkebolles with other stillings; from the other, Crains and drasse, washings of Hogheads, Turnes and Breeding Bolls, Bann, Chyrell and such like.

When they are yet young, & sucke, both they & their Dams must be well fed, they must be put to feed early in the morning, afoze the heat of the Sun, & after kept in shadowy places, where there is good stoze of water. Afoze they go to pasture, they must be medicined, lest the grasse scower them too much, by which they will be greatly weakened. In Winter they must not be put abroad, till the frost be off the ground, and the Ice thawed. And though the Swine wil runne at the known voyce of the Swineheard, yet Varro will have them brought both to pasture, and homeward, with the sound of a hohne: their meate must be given them scattered thin, so shall both lesse suffice, & the greater shall not harme the smaller: as soone as they heare the Hohne, though they be never so far off in the Woods, they come running with all haste. Polybius telleth, that the Italians use not to follow their heards, as the Crackes and others doe, but going a pretty way before them, they blow their hohne, their heards being acquainted with the blast, do follow them in great order. They do so well know and obey the call of the Swineheard (as we may beleve Alianus,) that when certaine Rubens, landing upon the Coast of Tuscan, and taking great numbers of them out of their holes, carried them aboard, the heards having weighed up their Anker and being under sayle, the Swine upon the hearing of their keepers voyce, suddenly ran to the maine side of the Ship, & overtaken her, whereby (the Pirates observed,) the Swine came safe to land to their Masters. As I have heretofore told you of the conditions of the Boare and the Sow, and of their keeping; so will I now shew you the manner of their breeding: The Breeding time is reckoned to be from Winter, till the twelfth of March, so shall you have them to farrow in Summer: for the Sow going soure with the Boare with pigge, farroweth in the May. She is with pigge at the first breeding, but they use to let them goe often to Boare, because, they sowe miscarry: & if you will have two farrowes in one yere, you must put your Sow to Boare in February, or January, that she may farrow in April or May,

A wonderfull  
full knows  
ledge in  
Swine.

when as there is good pasture abroad, and Dilke is in his chiefe strength: & when they be weaned, they may wel sēde upō straw, & grottoes: & after, the Sow may farrow again in the end of Autumme: for Varro saith, her farrowing times are so diuided for the nonce, as she may farrow twise a yere, while she hath scute Moneths to beare them, & tyme to sēde them. As soone as they be with pigge, you must kēpe the Boare from them: for with his malignesse, he maketh them to cast. Pong Swine for b: & de, must not be lesse then a yere old, as Varro would haue it: holwbe- it they begin at eight moneths, and continue seiden yeres. The Boare beginneth at eight moneths, or fife, and continueth well foure yeres, and after, at thre or foure yeres old you may geld them, and sat them. Some would not haue you kēpe up aboue eight, others not aboue fife: not that the Sow is able to kēpe no more, but that she that kēpeth more, scone fayleth. Varro reporteth, that the Sow of Aeneas Lavinus, farrowed at one time thirtie white Pigges: but it is monstrous when she farroweth more then she hath paye. Every Sow must haue her Sotis by her selfe when she hath farrowed, and not suffered to goe with the whole Heard, as other cattell are, but little Cotes to be made for them, wherein they may be kept either farrowing, or with farrow: for Swine, if they lye together in any number, being commonly ill mannered, doe lye one upon another, whereby they hurt such as are with pig. And therefore you must haue seuerall Soties where they may farrow, & made high, that the Sow cannot get out: for covered they must not be by any meanes, that the Swineheard may take that the Sow ouerlay none of them, & so see what they want, that he may make them cleane, and as oft as he cleaseth it, he must strein sand, or such like, to drie up the moisture: for though she be but a swinish creature, yet loveth she to haue her chamber cleane. When she hath farrowed, she requirith greater quantitie of meate, where- by she may giue the more milk, specially Warley scraped in wa- ter, or ground, & tempered with water. And if you haue not good Raze of meate, your best is to sell the Pigges: so shall the Dam, being deliuered of her burden, be sooner with farrow again. Such as are farrowed in Winter, are commonly poore & wretched, both because of the cold, & that their Dams do not like them so: wan-

ting

ting of milk, & biting their Wapps. If the Sow eate her Pigs it is no wonder: for Swine of all other beastes, can waite away with hunger, which when it provoketh, they eate not only their owne. but yong children, which not long since happened in Souther, to the pittifull discōfort of the Parent. They suffer not the Sow to go abroad in ten dayes after her farrowing, except it be to drink: after, they suffer her to goe about the house, that she may & better give milke. When the pigs ware great, they desire to go abroad with their Dams, at which time they are fed by themselves a part, to the end they may the sooner forget their mother, which they will do in ten dayes. It behoveth & Swineheard to be careful and diligent about his charge, that he have in memory every one of them, both old & yong, that he consider every farrow, & shut up those that be great with pig, & they may farrow in their sty. He must have special regard of every yong pig, that every one of them be brought up under his own dam: so; if they get out of the stile, they straightwaies mingle one company with another, whereby the yong Sowre is forced to gibe milke many times to more pigs then her owne: therefore & Swineheard must shut up every dam with her owne pigs. And if his memory serve not to know them all, let him pitch every Sow and her pigs with a feberall marke: for in a great number it shal behove him so to do, for reinforcing his memory. The old husbands observed alwaies two times in the yere for cutting of them; & Spring, & the fall of the lease, whereby they avoided the danger both of the heat & cold. The Boare pigs they cut when they were six Moneths old & again at foure yeres old, to make them fat, making two wounds, & taking out the Stone of every Swine: as els. when you have taken out one Stone, you must thrust your knife again into the wound, and cutting a sinder the skinne betwixt the stones, draw out with your fingers the other, so shall you make but one scarre: but this kinde of cutting is somewhat more dangerous. The Spottes are spain by burning the Watir with an Iron, and the scarre healed up, whereby they will both have no more pigs, and be the fatter. Aristotle, and following him Plinie, would have the Sow after two dayes fasting, hanged up by the fore legges, and so cut, whereby she will be the sooner fat: but I iudge it better to cut them when they be young, at two Moneths old, or younger, for

A Child  
eaten by a  
Sowre.

Of diseases  
in Swine,  
and the  
cures.

The Quin-  
sey.

Kernels.

Vomit.

Splene.

Choler.

So are they in least leoparchie. After they be cut, you must keepe them from drinke, and geue them but little meate: the wound must be anointed with fresh Butter, and closed up. As the bristling and turning up of the taile is a signe of a sound Hog, so be there certaine and assured signes of their sicknesse: for if you plucke off the bristles from the backe, and finde that their rootes haue blood in them, it shewes the swine is not wel. Besides, if your Hoggess be sicke, or taken with a Fever, they hang their heads at one side, and suddenly as they runne abroad, they stay, and being taken with a turning giobnesse they fall down: & therefore you must marke well on which side they hang their heads, that you may cut the eare of the contrary side to let them blood: and under the tayle beside, two inches from the rumpe, you shall strike the veine, which there is easly to be seene, by the bignesse of it: you must first beate it with a little Ricke, and after it swelleth with the beating, open it with your knife, and having bled sufficiently, binde it up with the rind of Willow or Elm: after this, keepe them up in the house a day or two, and geue them warme water, with a good quantitie of Barley-browe. If the Quinsie or Vuula, (to which disease this beast is wonderous subiect) chance to take them, Didymus would haue you let them blood behinde about the shoulders, others vnder their tongue: some againe cure them with lettering. If the kernels swell in the throat, you must let them blood vnder the tongue, & when they haue bled, rub their mouthes within with salt, finely beaten, and wheate browe: Democritus would haue you geue to euery Swine, three pound waight of the beaten raste of Daffadill. If they vomit, and loath their meate, it is good to geue them before they goe abroad, the shavings of Roaste, fryed with salt, and ground Beanes. Swine while they feed abroad, by reason of their great deuouring (for it is an unsatiabie beast) doe wonderously labour with the abundance of the Spleene: for remedie whereof, you shall geue them water as oft as they thirst, in Troughes made of Camarice, the iuyce of which wood is very wholesome for them. Democritus teacheth to geue unto Hoggess that haue the Spleene, the water wherein the Coales of Searth hath bene quenched. This beast hath sometimes a sicknesse wherein he pines away, and forsaketh his meate: and

if you bring him to the field, he suddenly falleth downe, and lyeth  
as it were in a dead sleepe: which as soone as you perceiue, you  
shall shut up the whole Herd in some house, and make them to  
fast one day, both from water and meate: the next day, the roots  
of the wilde Cucumber stamped, and strained with water, is  
giuen them to drinke: which as soone as they haue taken, they  
fall a vomiting, and so purge themselves. when they haue thus  
expelled their choler, you shall giue them hard Beanes, strained  
with Wyne. An excellent medicine against all Deuillence of Palsence,  
Swine, both Hieronimus Tragus teach, which is, when you see  
them infected, to giue them the Rutes of Polipodi, or the  
Ferne boyled in Wine, whereby they shall purge whatsoever  
is euill from them, and most of all choler, wherewith Swine  
are most troubled. Wherewith in Summer is hurtfull and  
dangerous to all kinde of Cattell, to this beast it is most hurtfull.  
and therefore you must not water them as you doe sheepe and  
Goates, but twice, or thrise a day: but if you can, you must keepe  
them by the water side, that they may goe thereto at pleasure:  
for the Swine is not content with drinking, but hee must often  
wade & plunge his filthy punch in the water, neither delighteth  
he in any thing so much, as to wallow in the dirt. And if you  
haue no such place nere, you must draw some water from the  
Well, and giue it them in Troughs abundantly: for except  
they drinke their fill, they will fall sicke of the Lunges: which  
disease is cured (as Columella writeth) by thrusting the roote  
of Wetterworth through their eares: Pliny affirmeth the Rode  
to be a present remedie for the sickness of Swine. Some say,  
that if a Sow lose one of her eyes, she dyeth soone after: other-  
wise she liueth. Aftone yeres. There is a kinde of disease a-  
mongst Swine (though otherwise they be healthie and fat)  
wherein their flesh is all infected with little graines, as big as  
Peas: the Swiches call them Galazo, and looe at this day  
Peazled Swine, which you shall soone perceiue by the sight of  
the tongue, and the boursingesse of their noose: this disease they  
say, is naturall unto them, from which you shall preserve them,  
if you mayle certaine plates of Lead in the bottome of their  
Trough. You shall also keepe them from this disease if you giue  
them to drinke the Rote of Biony: the generall and common

Thirst.

Lungs,

Peazled  
Swine.

remedy is Allome, Wyntstone, and Bay-berries, of each a like: adde therunto a handfull of Sate, beate them all together, and put them in a Bagge, which Bagge you shall cast into their water when they drinke, and renew it twice in the pore.

 Hidden  
sicknesse.

If you finde in your Swyne any sodaine or hidden sicknesse, the onely generall, most certaine & uall helpe for the same, is first to let him blood under his tayle, and under his eares, and if they blode not forthly enough, you shall beate them with a small sicke, and that will bring forth the blood; then to ap about the sores the barke of a yong Willow, and then keep him warme and giue him to drinke warme Ale, well mixt with Barley-meals and Med-oake in powder.

The Gall.

The Gall is a disease amongst Swine, because that choler is powerfull in them, which you shall know by a swelling which well arise under their talowes; the Cure is to stamp Colwyte and Mustard, and mixe it with Honey and water, and then straining it giue it the Swyne to drinke by a pinte at a time.

The sleeping  
evill.

Swyne are much subiect to the Sleepingevill in the Summer time, & you shall know it by their continual sleeping & neglecting their meate: The Cure is to haue them up, and keepe them fasting foure and twentie houres, then in the morning when hunger pincheth them, to giue them to drinke swillings warme, in which is stampd good Stace of Stonecrop, which as soon as he hath drunke he will vomit and cast, and it is a present remedy.

The Pore.

The Pore is an infectious disease in Swyne, and proceedeth from corrupt blood ingendred by pueritie, wet lying, & ouerheate and such like, and the Swyne cannot prosper which hath them. The Cure is to giue him first to drinke two spemfulls of Erackie, in a pint of Rhenish water, which will expell the infection outwardly, then to anoint the sores, with Wyntstone and Boaren grease, boyled together & to separate the sicke from the sound. Touching the feeding of Swine, you shal easily (though he be wanting) finde Berries, Marishes, and Come-felds to feede Swyne in. They will be fat (as Plinie saith) in threescore dayes specially if they be kept from meate thre weekes before you feede them: they are fatted with Barley, Dates, or other Corno, or Pulle, either giuen whole, or gramin, but of all others, best

Feeding  
Swine.



best with Oast : and that Arsh is better, and of more substance  
that is fed with Acornes, then that which is fattened with either  
Barley mase, or Chelmut. This beast will in time be so fat, as  
he will be able neither to goe, nor stand. *Petr. Varro* tells that  
there was sent in Arcadia a Sow so fat, that she was not onely  
unable to rise, but suffered a Houe to make a nest in her body,  
and so lay her young there. The same *Varro* reporteth, that there  
was sent to *Volumius* a Senator in Rome, a piece of Pork of  
two ribs that weighed thre and twenty pound : the thickness  
of which srow from the skinne to the ribbe, was one fote and  
thre inches. Your best is to put to fattening your Swine of two or  
thre yeeres old : for if they be younger, their growing will hin-  
der their feeding.

These are the opinions of the Ancients, but to come to the true and perfect order of feeding of Swine, it must be according to the Country wherein you live, as if you live in the Country which is *Waldie*, where *Roef* of *Wass* is, then the *maist* is a sufficient feeding, and will make them *fatin* five or seven *wokes*; then having got *flesh* and *fattness* bring them home and for ten *dayes* or a fortnight, feed them with *dry* *Wense* or *Wanes*, and plenty of water, and it will so harden their *flesh* and *fat* that it will not consume when it comes to *boyling*.

If you live in a champaigne Countrey which is farre from woods, then fly up your fallings & let them not ramage abroad but have their fode & water brought unto them till they be fat. now the first two daies after their putting up, give the nothing. the third day early in the morning give them a prettie quantity of oze Beafe & Beanes, at none give them as much more, at foure a clock as much more, & when you go to bed as much more, but all that day no water. The next day you shall feede them againe at the same houres and set water by them. that they may drinke at their owne pleasures: & twice o: thrice a wake as your provission will serve you, it is good to fill their Bellies with Cowe Till hay, Buttermilke & warme wash, but by no means scant their proportion of Beafe and Beanes, and thus you may feede a Swine fat enough for slaughter, in a moneth or two weekes.

There is another way of feeding in Champion countries & that is at the Make or Stacks of Pease & Beans, which Stacks must be

**The best  
way of  
feeding.**



be placed whether at home or in the field, neare to some water, no matter how muddy or filthy soever, and these Ricks are to be cut down by small degrees, and the Reapes Haying, Strawe and right cast amongst the swine; This manner of feeding is best for young Sowkete, but generally for all sorts of swine, you may amongst these swine feede Sowpes also, and it is an excellent husbandry, for so you shall not lose a Pease, the rooting of the swine gathering whatsoever the sheepe scattereth. There is another manner of feeding of swine, for such as live in great Market Townes, and about Cities where Graine and Pulse is scarce; and though the Bacon be not the best, yet it is tollerable, the manner thereof is thus. They first fry up their swine, and then take Chandlers Statnes (which are the dreggs and offall of randed Tallow) as hard skirnes, kelles, and fleshy limps which will not melt, and mixing it with warme wash give it the swine to eat, th. is or four times a day, and it will so bainety puste him up with fatnesse; then bestow upon every swine a bushell of dye Pease and Beanes to harden his flesh, and then you may kill them at your pleasure.

Lastly, if you will feede a swine for Lard, or a Boare for Bacon, you shall the first weeke give them only sodden Barley with plenty of water, Whey, or Buttermilke, at such times as was formerlie shewed, then after you shall feede them with rawe Gault from the flooze befoze it be dyled, till you finde them of sufficient fatnesse, then for a weeke after give them dye Pease and Beanes to harden their fatnesse. It is good to give them sometimes to drinke the washings of Dogg-heads and Ale Barrels, & at all times to let them have store of water. Now for their leare or lodging, let the Braine lye Franked on the bare Boards or paved Stones, and the Dogge tenderly littered. This manner of feeding makes the whitest fatted and best flesh that may be. To keepe your Bacon any long time you must use great diligence in the salting and drying of it, whereby you shall have it both the wholesomer, and sweeter, and besides to continue divers yeares to serue the turne, if scaritie happen.

Your Doggs being in this sort fatted, you must shut up, and not suffer

suffer him to drinke the day before you kill him, whereby the flesh will be the drier. When you have thus after his thirst killed him, you shall either skald him with water, or with a flame made with straw, or sticks, syndge him : so the manner of such as slay him, I like not. After that, hanging him up by the heeles, you shall plucke out his bowels, and put them to drying : his flesh being colde and hard, you shall lay upon a table, and cut him into flatches, pouder them with salt, thrusting great stoke thereof in every place, specially where the bones be : that done, put it into your poudering tubbe, strewing salt enough under it : some would have you salt it in the wane of the Moone. Before you pouder it, you must presse and dry out all the bloud, and the water. Some before they salt it, doe plucke out the bones, thinking it the best way for preserving it, and to keepe it longest sweet. Others againe doe not straight wayes put it into the poudering tubbe, but doe leade it upon a Table for ten dayes after, and then hang it up in a pore ayre, to dry in the larde. And when it hath bene dryed in the winde certaine dayes, by little and little, they let the smoke come to it, and afterwards more abundantly. The Bacon will be the sweeter, if beside the smoke, the winde may come to it : if you hang it in great smoke at the first, it will be ruffie.

Having thus spoken sufficiently, of all the Cattell that are usefull and familiar with man and serue to sustaine both him and his familie, I will now speake something of Dogges and their uses so farre as they are profitable to every good husbandman.

The Dogge (though the Lawyer alloweth him not in the number of Cattell) and though he yalds of himselfe no profit, yet is he as the shepheard, (for his trustinesse, and watching of the flocke) to be esteemed and set by : for they have bene sene to fight in the defence and quarrell of their Masters. Yea, divers of them have bene knowne after their Masters death, upon great affection and love, to samish themselves, whereupon the price of good Dogges growe to be very great. It is written, that Alcibiades gave for one Dogge eightscore poundes. There is not a more necessary creature then the Dog about Husbandry : for beside his singular faithfulness and watching in the night time, he is also a quarter master in keeping of Cattell, and very needfull

Dogges

needfull for the defence of them, specially sheepe & goates, which would be soone destroyed by Wolves, Foxes, Crayes, and other vermine, if dogs were not set to be their keepers. Swine feeding in herds, if the wilde beasts invade them, making as if were a larum with their grunting, and crying, assemble themselves, in their owne defence. The greater Cattell defend themselves some with their hailes, some with their Hornes, onely the poore sheepe hath no souldier but the Dogge. Of Dogges that serue for profit, there are but thre sorte: for the fourth (which are but for pleasure) I make no account. One of the sorts is such, as by scent, or swiftnesse, serue for the chase, and killing of wilde beasts: these, what manner of ones they should be, and how they should be ordered, Xenophon and Oppianus, in their Cynigetickes haue taught, and I in my last booke, where I shall speake of hunting, will declare.

The Bares  
Dog for  
the house,

But now I will onely speake of Dogges for the husbands, and keepers both of the house and Cattell: and first the Pastie that kepeth the house: for this purpose you must provide you such a one, as hath a large and a mightie body, a great and a shrill voyce, that both with his barking he may discover, and with his sight dismay the Thiefe, yea, being not seene, with the booz of his voyce put him to flight: his stature must neither be long nor short, but well set, his head great, his eyes sharpe, and fiery, either browne or gray, his lippes blackish, neither turning up, nor hanging too much dolowne, his mouth blacke and wide, his neather iawes fat, and coming out of it on either side a tang, appearing more outward then his other tath; his upper tath even with his neather, not hanging too much over, sharpe, and hidden with his lippes: his countenance like a Lion, his breast great, and shaggy, his shoulders broad, his legges bigge, his tayle short, his feet very great, his disposition must neither be too gentle, nor too curst, that he neither salone upon a thiefe, nor slee upon his friends, very waking, no gadder abroad, nor lawy of his mouth, barking without cause, neither maketh it any matter though he be not swift: for he is set to fight at home, and to give warning of the enemye.

The Shep-  
herds dog.

The Dogge that is for the folde, must neither be so gaunt, nor so swift as the Crayhound, nor so fat nor heavy as the Pastie of the

the house, but very strong, and able to fight and follow the chase, that he may be able to beate away the Wolfe or other beasts, and to follow the chase and recover the prey, and therefore his body would rather be long then short and thicke: in all other points he must agree with the Bando. Touching the kinde, the Dogge is thought better then the Bitch, because of the trouble she bringeth when she is sawte: howbeit, the spayed Bitches doe bite the sorest, and are more waking. For their age, they must neither be whelpes, nor too old: for the whelpes can neither defend himselfe, nor the stocke, whereas yet the old hath some use about a house. If you have a whelp (which age is better to be trained, either for the house or the fold) you shall perceiue by the foot whether he will be great or no. His head must be great, smooth, and full of beines, his eares great, and hanging, his points long, his forelegs shorter then his hinder, but right straight and great, his clawes wide, his nailes hard, his hale neither fleshy nor too hard, the ridge of his backe not too much appearing, nor crooked, his ribs round and well knit, his shoulder points well distant, his buttockes fat, and broad, and in all other parts (as I said) of the Bando. For his colour it maketh no great matter, though Varro would have him white, and so would Columella the Dog for the field, as he would have the House-dog to be blacke: but the pyed colour is judged naught in them both. The white they commend, because he may be discerned from the Wolfe in the night, where by they shall not strike the Dogge in stead of the Wolfe. The blacke againe, for the house is best commended, because of his terrour to the chase in the day, and the hurt that he may doe by night, by reason of his not being seene: the dunne, the bairned, and the red, doe not mislike me, so they be well marked beside. Thus must you judging him as a Lyon by the claw, either buy one, or bring up one for your purpose. How much teaching or bringing up prebaileth, appeareth by Lycurgus his example in Xenophon. To make them fierce and curst, you must plucke them by the eares, set them together with your handes, and keepe them from being hurt, so shall you have them the bolder and the fiercer, and such as will never give it over. You must use him first to the chaine, by tying him to a clogge, letting him draw

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The Banns  
Dog for  
the house,

But now I will onely speake of Dogges for the husbands, and keepers both of the house and Cattell: and first the Bannie that keepeth the house: for this purpose you must provide you such a one, as hath a large and a mightie body, a great and a shrill voyce, that both with his barking he may discover, and with his sight dismay the Thiefe, yea, being not seene, with the horror of his voyce put him to flight: His stature must neither be long nor short, but well set, his head great, his eyes sharpe, and fiery, either browne or gray, his lippes blackish, neither turning up, nor hanging too much downe, his mouth blacke and wide, his neather-lawe fat, and comming out of it on either side a tang, appearing moze outward then his other tath; his upper tath even with his neather, not hanging too much over, sharpe, and hidden with his lippes: his countenance like a Lion, his breast great, and shaggy, his shoulders broad, his legges bigge, his tayle short, his feet very great, his disposition must neither be too gentle, nor too curst, that he neither salueth upon a thiefe, nor lie upon his friends, very waking, no gawder abroad, no lavish of his mouth, barking without cause, neither maketh it any matter though he be not swift: for he is but to fight at home, and to give warning of the enemye.

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it a while by his necke, and when you have a little space used him in this sort, then may you eyther leade him or tye him: it is best to keepe them tyed in the day time, to make them the currier, and to let them loose in the night time: so shall they in the night time watch, and in the day sleepe. To arme them against the Wolfe, or other wilde beastes, you may put broad collors about their neckes of Railes, and yron fluddes, lining it with soft leather within. You must looke that your Dogges be of a good kinde, and (if you can) all of one kinde, so shall they stick the better together: chuse them that have the curriest Dammes, and such as have their Dappes even. They begin to litter at a yere old, and continue nine yeres, after whiche they be woorth nothing.

The Dogge (as Columella saith) gettes Whelpes lustily, till he be tenne yeres olde: the Whelpes of the olde Curses are slow and naught. Homer seemeth to make the life of a Dogge above twenty yeres, where he speaketh of the coming home of Ulysses, and the knowledge of his Dogge: And I myselfe have seene Dogges that were said to be so much, but altogether unprofitable. Their age may be knowen by their teeth, the young having (as Aristotle saith) white teeth and sharpe: the olde blacke and blunt. In the Spring they begin to be fatte, and goe with Whelpes (as Aristotle and Xenophon saith) thre, foure, fives, or at the most thre, foure and thre. Varro writeth, that they goe thre moneths with young: the Dogs of Lacedemon ingender at eight moneths olde, and all other Dogges also at halfe a yere: they are with whelps with once liming: they litter about June: when they be littered, they are blinde, and the more milke they have, the longer it is before they see, but never longer then one and twentie dayes, no sooner then seaven daies. Some holde opinion, that if there be but one at a litter it will see the ninth day, if two, the tenth day, and so aday added so: as many as be, and that those that be of the first litter, doe soonest see: the best of the litter is that which last seeth, or which the Witch first carrieth to her kennell.

As soon as they be whelped, cast away such as you mislike: of seaven, keepe thre or foure: of thre, two: while they be young, at the first they must be suffered to play with the dam, that they may grow



growe the better; afterward, let them be taught, and tye'd (as I told you) tying them in the day, and letting them loose in the night, and such as you know to be of good kinde, and would have them growe well, suffer them not to sucke a strange damme: for the milke and blood of the mother is of great force to the goodnesse and groweth of the Whelpes. And if so be the Witch lacke milke, suckle them with the milke of a Goate, till they be foure moneths olde. Lay underneath them in their Kennels Straw and Chaffe, that they may lye warme: for they cannot well away with cold. You must cut the tails of the Whelpes when they be sixe weekes old, in this manner: there is a sinew that comes from the ridge of the backe, to the tip of the taile, which being held fast with a pincer, and a little sawe cut out, you shall cut asunder, whereby neyther the taile shall grow to any foule length, nor the Dogge shall at any time after (as they say) be mad. They are thought to lift up the legges when they pisse, at sixe moneths olde, which is a signe of the perfectnesse of their strength. The feeding of both kinde is all one, they may be fed with bones, porredge, and such like: in any wise let them want no meate, for if they doe, they will for hunger raven abroad, and forsake both the house and the focke. Xenophon would have you give them milke all the yere long, and such sode as they shall sode with all their life time, and no other thing: if you feed them too full, it will breede (as he saith) diseases in their legges, and rot them within. Bread is their common meate, but Varro would have it given eyther with Milke or Whay, by use whereof, they will never forsake their Cattell. You may give them bread, bread, with the broth of sodden bones, and the bones themselves brosd, which will make their tath the sounder, and their mouthes and jawes stronger, and they will be the kinder, by reason of the sweetness of the marrow. You must beware they eat no dead sheepe, lest by reason of the taste, they fall to the live ones. While the Witch hath Whelpes, you must feede her rather with Barley bread then Whheaten bread: for they prosper better with it, and makes them give more milke. You must feede them thrise a day, in the morning when you tye them up, at none, and againe at night, when you let them loose. Their names that you give them

Fit names  
of Dogges.

them, must be short, that they may soone heare when they bee called. The Greekes and the Latines, gave them names of two syllable, the Germanes lightly but one syllable, as Ball, Blat, Patch, Grim, &c. The diseases and grievances of Dogges, are the biting of Flies, Ticks, and Manginelle. Against this you must wash them when they bee whelpes, with bitter Almonds, stamped and strained with water, washing them both about their eares, and betwixt their clawes, that neither Flies sticke to them and blister them, nor Ticks, or Lice molest them: and if they be already mangie, you must annoint them with Tarre, and Doggesgrease: the Ticks also, if you touch them with this medicine, will presently fall off, for you must not plucke them off by force. If your Dogge be full of Fleas, the remedy is Cummin beaten, with a like quantity of nesting powder, and mingled with water, rub him over with it, or the old Dogges of oyle rubbed over all his body. If he be scabby, take Cythisur, and Cesampum, beate them together, & mingling them with Tarre, annoint the soze: this medicine will also remedy a Christian creature. They say also, that if you thrust the skinned through with an iron, it will heale the manginelle, or if you smeare them over with Compouder, or cast them into a Tanners fatte.

Aristotle writeth, that Dogges are chiefly troubled with three diseases, Madnesse, Quinsiey, and the Gout, and whatsoever he biteth in his madnesse, becommeth also mad, and dyeth thereof: the madnesse is most extream in the Dogge dayes: whatsoever is bitten by them, falleth straightwayes into a loathing, and feare of water. To preserve them from it, you must mingle with their meate for thirty dayes together, or if they be already infected, give them nesting powder to eat. Pliny writeth, that there is in the tongue of Dogges a little worme, called of the Greekes Lyra, which if it bee taken out while they bee whelpes, they will neither be mad, nor greedy, nor rabenous. If the Dogge be madde, he refuseth both meate and drinke, and driveth ill savoured sony matter, both from his nose, & mouth, he looketh with a loathsome countenance, his body is leane, and more clong together than it was wont to be, he beareth his taile betwixt his legges, & biteth without any barking whatsoever he

Mad Dog.

he mates, falling as well upon men, as beasts, making no difference betwixt his friends, & strangers. As the Dog is a watchman and keeper of the house and the flocke, so the Cat is a household servant to be cherished.

The Egyptians for their profitableness, did worship for their God a golden Cat; for whereas Rats and Mice, as well in Cities, as in Villages, are greatly hurtfull, we keepe up Cattes for the aboyding of the mischief, neither is there a speedier remedy. The Cat is a beast of nature enemy to the Mouse, watching in the night, and sleeping in the day, stealing suddenly and swiftly upon the Mouse: she saith better by night then by day (as Alexander Aphrodiseus writeth) her eyes shine and glister in the darke. They goe a Catterwallowing about February, or other times in the yere (for they often ingender) and bring forth their young ones blinde, as the Bitch doth. Herodotus saith, that after the Catte hath kitted, she commeth no more at the Bucke, which when he perceiveth, and cannot have his purpose, he killeth the young, whereof when she saith her selfe bereft, for very desire of young (whereof this kinde is most desirous) she commeth straight to the Bucke. For my part, I would rather counsell you to destroy your Rats and Mice with Traps, Banes or Miceles: for besides the stuttishnesse and loathsomnesse of the Catte (you know what she layes in the Salt heape) she is most dangerous and pernicious among children, as I my selfe have had good experience.

Cattis

*Soli Deo honor & gloria.*

The end of the third Booke

V

The



## The fourth Booke:

Entreating of Poultrie, Fowle, Fish, and Bees.

PVLLARIVS. MELLISSERVS.

PVLLA.



So keeping and breeding of Cattell, both yelds no small commoditie and guines to the husbandman, so the nourishing and maintenance of Poultrie, Fowles, Bees, and Fish, (if the Countrie be for it) both commonly arise to his great advantage, whereby both the revenue is greatly increased, and the table daily with daintie, and no chargeable dishes furnished. Cages, and houses for Birds, wherein were kept all manner and sorts of Fowle, were first devised by Gaster Lelius Strabo at Brundisium, from which time it was first put in use, to pen up such creatures, as naturallly were accustomed to lie at their liberty in the ayre. At which time also began to be brought in strange and outlandish Fowles, the keeping and breeding whereof, yeldeth to the husbandman both pleasure and profit. The chiefe place is due to the Cocke and Henne, that are beside so common, as the poorest widdow in the Countrie is able to keepe them. In this Bird there are three points of naturall as-  
section

fection chiefly to be wondered at. The first, the great carelesse that they have during the time of their sitting, wherein for the desire of hatching their young, they seeme to be carelesse of either meate or drinke. Secondly, that they beare such love to them, that they stick not to hazard their owne lives in the defence of them. And thirdly, that in the strome, great colde, or sicknesse, they preserve and nourish them under their winges, not making for the while any account of their owne selues: and to these I adde a fourth vertue, and that is their valiantnesse, and hardinesse in which they exceede all sensible Creatures whatsoeuer, fighting their Battails so faithfully and truly to the ende, that there is nothing but eminent death (if they be left to their wills) which can separate them \*.

And therefore, since these are common for every man to have, and that they alwayes feede about the house, I thinke it best to begin with them, and to tell you which are best to be liked, which to be brought up, and which to be fatted.

First, the best to be bought for broode, are the dunne, the red, the yellow, and the blacke; the white are not to be medled with, because they are commonly tender, and prosper not, neither are they beside fruitfull, and are alwayes the fairest marke in a Hawke, or a Buffards eye. Let therefore your Henne be of a good colour, having a large body, and breast, a great head, with a straight, red, and dubble combe, white eares and great, her talon seven. The best kinde (as Columella saith) are such as have five clawes, so that they be free from spurres: for such as weare those Cockish weapons are not good for broode, and disdain the company of the Cocke, and lay but seldome, and when they sit, with their unruly spurres they breake their Egges. The little pullets, or Hennes, though the old age, both for their unfruitfulness, and other causes disallowed them, yet in many places they prove to be good, and lay many Egges. In England, at this day, they are used as a daintie dish at mens tables.

In the choise of your Cocks, you must provide such as will trade lustily, of colours, as I told you for the Hennes, and the like number of fallons, and like in many other points, but of stature they must be higher, carrying their heads straight up, their Combes must be ruddy and high, not hanging, nor falling

The choise  
of Hennes  
for brood.

The Dunghill  
Henne.

The choise  
of Cocks  
of the dunghill.

downe, their eyes blacke and sharpe, their Bills short & crooked, their eares great and white, their wattels orpent, hauing vnder them as it were, a kinde of grayish beard, the Beake feathers of colours diuers, either a pale, golden, or a glistering green, which must hang rustling from his Beek to his shoulders, their breasts must be large, and well brayned, their wings well feathered and large, their Tails dubbed and flagging, their rumpes and thighs full of feathers, their legs strong, wel armed with sharpe and deadly Spurres: Their disposition (for you shall not neede to haue them great fighters) would be gentle, quicke, and lively, and specially good wakers, and crowsers: for it is a Wyrd that well appoynteth both the night and the day, & (as Prudentius witneseth) exhorteth to repentance. Neither must you on the other side, haue him a Craddon, for he must sometime stand in the defence of his wife, and his children, and haue stomache to kill or beat away a Snake, or any such hurtfull vermine: but if he be quarrellous, you shall haue no rule with him for fighting and beating his fellows, not suffering them to treade, though he haue more then his hands full himselfe. This mischief you may easily preuent with shackling him with a shoe sole: for although such lusty fighters are bred up and cherished for the game, yet are they not to serue the husbandmans turne at home. A Cocke framed and proportioned after this sort, shall haue five or six Hennes going with him.

Now for the choise of the Hen, which is as materiall in the Breede as the Cocke, shee ought not to differ much from his excellency, both in valure, vigilancy, labour for her selfe, and her Chickens: for her shape, & biggest are & best, every proportion answering those formerly described; only for the combe let her haue a tuft of feathers like a Crowne: to haue many clawes is good, but to want the hinder Claw is no hurt for the safety of the Eggs. An Hen that croweth is neither good Breeder nor Layer, the In perfection of Breeding and Sitting, the elder Hens are the best, in the perfection of Laying the yonger Hennes are most able, but for neither purpose, chuse a fat Henne, for shee is sloathfull, carelesse and no paines taker.

MELLISSEVS. I pray you let me vnderstand what time of the yere is best for bringing forth of Chickens?

PVLLARIVS. In some places, specially the hottest Countries,

tries, the Hens beginne to lay in January, in colder Countreies, eyther in February, or at the latter end of January: you must also further their laying by giuing them meates for the purpose, as Barley halfe sod, which maketh both the Egges the fayer, and causeth them to lay the oftner. Some thinke it good to mingle therewith the leaues, or the seedes of Cicylus, which both are thought to be greatly of force in making them fruitful. If this be not to be had, you may supply the want with Sperry, or (as Cardanus saith) with Hempe-seede, which will cause them to lay all the Winter.

When they lay, you must see that their nests be cleane, & kept still with fresh cleane straw: for otherwise they will be full of fleas, and other vermine, which will not suffer the Hen to bee quiet, whereby the Egges doe not hatch even together, or many times waxe addle and rotten. The Eggs that you set under them, must be new layd; howbeit, so they be not aboue ten dayes olde, it maketh no great matter: if you looke not to them they will straight wayes sit after their first laying, which you must not suffer, for the young Pullets are better for laying then sitting: the desire of sitting is restrained by thrusting a feather through their nose. The old Hennes must rather be suffered to sit then the younger, because of their experience. Herein must you haue a speciall regard to know which be best to sit, for some be better to bring up Chickens then to sit. Others againe, will breake or eate up both their owne Egges, and their fellowes Egges: such you must put asleepe, and if their Nails and Billes be sharpe, rather imploy them in brooding then in sitting. Democritus telleth, that Chickens may be brought forth without setting under the Henne, if so be the dung of Hennes sifted very fine, be put in little bagges, basted about with soft feathers, upon which the Egges must be laid straight upright with the sharpe end upward: upon these againe must the like quantitie of Hennes dung be laid, so that they be of every side closely covered. This done, you must suffer them to lie for the two or thre first dayes, and after, every day turne them, taking good heed, that you knocke them not one against the other in the turning. After twenty dayes, you shall finde the Egges broken: and therefore the twentieth day, plucking away the shels, & ta-



king out the Chickin, you may commit them to the Henne. It is writtten, that Chickens have bene hatched by the continuall warmth of a womans bosome : beside, it hath bene seene that Egges being laid in an Oven, or a warme place, covered well with straw and chaffe, having a little fire beside, and one to turne them continually, have disclosed and broken at their accustomed time. Aristotle writeth that Egges put in warme vessels, or covered with dounge, will hatch of themselves. The number of the Egges that your Henne shall sit upon, some would have to be odde, and no more, in March nineteene, and no lesse : which number you shall continue all the Summer, till September, or October, after which time it is to no purpose to breede any longer : for the Chickins, by reason of the cold weather, and diseases, never prosper. Yea, some be of opinion, that after the tenth, or twelfth of June, you shall never have saire broode, and that the best season for setting, beginneth at the tenth of March. And herein you must alwayes be sure to have the Hone encreasing, from that she be tenne dayes old, till fiftene : for that is the best time to set in. And so must you againe dispose the time, as the hatching may fall out in the encrease of the Hone : for the iust time of hatching, there are sundry opinions: Aristotle writeth, that they are hatched in nineteene dayes, Varro (for Chickins) one and twentie daies, or twentie dayes: for Peacocks, and Geese, seven and twenty daies, & sometimes more : and Duckes, in the like space to the Hen, specially if they sit night and day, allowing them onely the Mornning, and the Evening to feede : which times they must of necessity have.

If so be you will set under your Henne Peacocks Egges with her owne, you must set her upon the Peacocks Egges ten dayes before she have her owne Egges, whereby they shall be hatched all at once, neither must you set above five Peacocks, or Goose Egges under a Henne. If you would have all Cocke Chickins you must chose such Egges as be longest and sharpest, as againe (for Hennes) the roundest, (as both Pliny and Columella write) though Aristotle saime not of that opinion. To understand which be good Egges, which not, you must (as Varro teacheth) put them in water, and such as be naught will

To have  
Cocke  
Chickins,  
or Hennes  
Chickins.

will swim aloft, and the good goe straight to the bottome. Others doe hold them up against a Candle, and if they see through them, they indge them light and naught. You must in no wise shake them, or hogge them, least you brake the strings of life, that are but newly begun: it hath bene sene, that by shaking of the Eggs, the Chickins haue bene hatched lame. We may beside perceiue whether the Eggs will proue well or no, if foure daies after the Henne haue sitten, you hold them up in the Sun, or other light, and if you see that they be cleere, cast them away, and put other in their places. Against thunder, that many times marreth the Egges, some doe set about them the Leaues, or <sup>Against</sup> Branches of Bayes, or Bentes, or Grass, others (again) the <sup>hurt of</sup> heads of Garlick, and Railes of Iron. In the great heat of the Summer, you must now and then sprinkle the Egges a little with water, & wet them, least by the extreame heate they waxe dry and able, specially the Eggs of Turkies and Pennes. Whensoever you meane to make cleane their nests, you must take up the Egges, and lay them tenderly in some little Basket, and so lay them spadiely againe in the cleane nest: nere to the place where the Hen sits, you must set water and meat, that they may the better kepe their nests, and that by their long absence the Egges waxe not cold. And although the Henne doth alwayes turne her Egges, yet it behobeth you when she is from the nest, to turne them softly with your hands, that by receiuing a like warmth, they may the soner be readie. And if she haue happened to burst any of them with her foete, you must presently remoue them. At the ninetienth day, you must looke diligently whether the Chickins doe iobbe the shell with their bills, and hearken whether they peepe: for many times by reason of the hardnesse of the shell they cannot come forth, and therefore you must helpe them out with your hands, and put them to the Henne, and this you must doe no longer then three daies: for the Egges, that after one and twentie daies make a noise, haue nothing in them, and therefore you must cast them away, that the Henne lose not her labour. Upon the twentieth day, if you stirre the Egges, you shall heare the Chickin; from that time begin the Feathers, the Chickin lying so, as the head resteth upon the right foote, and the right wing lieth up.

on the head, the polke diminishing by little and little. You must not take the Chickins away as they be hatcht, but suffer them to remaine one whole day with the Henne in the Nest without meate or drink, till such time as they be all hatcht. It is wonderfull, & yet the experience shewe, that before they be suffered to eate, they take no harme, though they fall from a great height. The next day, when all the flocke is come forth, Columella would have you to put them under a Sibe, and to perfume them with the smoke of Penyriall, or to hang them in a Basket in the smoke, which preserveth them (as it is thought) from the pippe, which many times destroyeth the poore Chickins: then must you put them into a Cope with the Henne, and feede them at the first with Barley-meale, sodden in water, and sprinkled with a little Wine. Afterwards, when they goe abroad, you must seele everie one of them whether they remaine any of the meate they received the day before: so; if their cropes be not emptie, it betokeneth want of digestion, and therefore you must keepe them fasting till all be digested. You must not suffer them to goe farre from the Henne, but to keepe them about the Cope, and to feede them till they ware strong with brused Barley, and Barly meale: you must also take good heede, that they be not breathed upon, by either Toad, Snake, or Cuet, for the Ayre of such is so pestilent, as it by & by destroyeth them all: which mischief is avoided by burning of Harts haine, Galbanum, or Romans haire, the smoake of all which preventeth this pestilence. You must see beside that they lie warme: for they neither can suffer cold, nor too much heat: the feathers about their taitles must be pulled away, least with the hardning of their dung, the passage be stopped, which if it be, you must open softly with a little quill: you must keepe them with the Henne for a moneths space, and after suffer them to goe at liberty. Both the old, and young, are of all other diseases most troubled with the pippe, specially about Harvest time, which is a little white skin, cowering the tipps of their tongue, which is to be plucked away with the nailles, and the place to be poudered with Ashes, or Carlik poudered & sprinkled upon it. From this plague you shal preserve them, by feeding them in cleane vessels & giving them alwaies the purest, & cleannest water, & keeping their houses

Against the  
pippe.

uses alwaies cleane, and smoaked, or by smoaking them, as they sit, with the smoake chiefly of Bayes, and Savin. The wivies of the countrie do commonly cure them, by thrusting a feather through their nose, and stirring it every day. If their sides be soze, you may heale them with the juice of Purcelane, and Romans milke, annoynting on the outside, or with Cummin, Honey, and Salt Armoniacke.

You shall rid them of Lice, with parched Cummin, & Stane sacre, a like quantitie of each beaten together, and powred on with Wine: also the water wherein wilde Lupines have bene sodden. If your Henne fall to eating of her Egges, taking out the white, you must powze in Plaster, of some liquid thing, that may come to a hardnesse in the shell. To keepe them from eating of Grapes, you shall give them the Berry of wood called the wilde Wine, gathered from the hedge befoze it be ripe, & sodden with Wheat flower, the evil taste whereof will cause them to loath Grapes. Plinie affirmeth, that if you give them the flowres of the Wine with their meat, they wil not touch grapes.

There is another disease which these fowle are much subiect unto, which is called the Rouse, and is a filthy Wyle or Impostumation on the Rump, which in a short space will corrupt the whole body: it is to be knowne by an unnaturall ruffling and turning backe of the Feathers; and the Cure is to bare the soze and lay it open, then launce it and take out the Coze, then wash the place with Allome water and salt mingled together.

If your Poultry be bitten or stung with any venemous thing, which you shal easily know by their lowring & sodaine swelling, presently take the leaves of the round Aristoloch, and chopping them and miring them with Bay-butter anoynt the soze there, with and it helpeth.

The Laske or Flure in Poultrie is an unnaturall Scowle, ring and aboyding of excrement in more then an ordinarie manner, bringing the fowle to that weaknesse that it is not able to subsist; and the Cure is to take Beane-meale and miring it with Bole armonie, scald it in milke and so making small pellets give it the fowle to eat and it will knit them, and dye them, for this disease is gotten onely by eating too much moyst meate.

They

Stopping in  
the bellie.

They haue also another disease which is contrary to this, which is called the stopping of the bellie, & dyes a fowle so within y<sup>e</sup> they cannot aboyde their excrement, which is worse then scowring: the cure is first, to anoynt their vents w<sup>th</sup> tuelle with the oyle of Roses, then giue them thre or foure pretty square bits of the Welladone roots cleane washt and kept in the scope of Roses and it helpeth.

Crowtrod-  
den.

There is a disease amongst Pullen, which is called Crowtrod, trodden, which is when a Hen is trodden with a Carion Crow, Rake or Jackdaw (as it hapneth very oft) & is a disease so pestilent that it is held incurable, & the signes thereof are the flaring up of the feathers, and a backs turning like those of the Ginnie Hen, beside the hanging dolone of her wings and other mortall countenances: the skilfull housewives for this disease take the leaues of round Aristolochie & the leaues of Gentian, and boile them in oyle, and then anoint the Henne all ower therewith, and if in twelue houres you see not amendment, then kill the Henne.

Hennes that  
Crow.

If your Hen chance to crow, which is an euill and unnatural infirmity in her, you shall forthwith pull her wings, & giue her wheate scoched & mixt with the powder of Chaulke, & kepe her as close as is possible from the companie of all other Pulline.

Choyse of  
Poultrie.

As in all other cattell of the countrie, so in these kindes y<sup>e</sup> best are to be kept, & the worst either to be sold, or to be killed in the house. And therefore ebery yere about the fall of the lease, when they cease to breede, you shall lessen their number, & put away the old ones. Such as are aboue thre yeres, & such as are either unfruitful, or not good bringers up of Chickins, but specially those y<sup>e</sup> ate up either their owne Eggs, or their fellowes, or such as after the Cockish manner either crow or tread: to which number you shall also adde, such as were hatched after the tenth of June, which neuer p<sup>ro</sup>ue to be sayze: but the Cocke, as long as he is able to tread, you may kepe: for you shall seldome meete with a good Cocke. For fattening, the best are those that haue the skins of their necks thicke and fattish. The place where you meane to fat them must be very warme, & of little light, because. as both Varro, and our owne experience sheweth, the light, and their often stirring, keepeth them from being fat: thus must they be kept for fife and twentie dayes, wherein they will be fat.

Fatting of  
Poultrie.

Let them be placed in Copes, or Penns made of Lathe or Boards with Troughes for water and meate, and very cleane & neatly kept, and when you put them into the penns, pull away besides their feathers from their heads, their wings, and their tayles, the one for avoyding of Lice, the other for binding their bodies. The meate that you give them, must be Barley meale, which mingled with water, must be made in little pellets, wherewith they will be fat (as some thinke) in fourtene dayes: but see that you give it them but moderately at the first, all they well digest it, after give it them in quantitie, according as they digest it: and in any wise give them no new, till you perceibe, by feeling of their Croppes, that the olde be ended. Others doe sprinkle their Peale with Honey sodden in water, putting to thre parts of water, one of Honey, and one of Wine, and wetting herein wheaten bread, they herewithall doe cramme them. Others say, that if you put hereunto a little Milke, they will be wonderfull fat. The Cockrels are gelded (as Aristotle saith) in the hinder part, which when they tread, falleth out: this part, if you burne two or thre times, they will be Capons. And if they be right Capons, their Combs becommeth pale, neither crowing, nor treading any more. Our Wives of the Countrey, cutting them betwixt the legges, take out their stones, and sewing up the wound, anoint it with Butter: which done, they shut them up in a Cope, not suffering them to drinke in a day or two. From the beginning of Haruest, and all Winter long, the offall of the Cozne, and the Barnes doze both seide them sufficiently: where they plant Vines, sparing other more costly sodes, they seide them with the kernels of the Grapes: and where there is neither the offall of Cozne, nor Grapes, they must be fed with Dates, Sperry, or such like. To cause them to lay in Winter, you must give them (as I told you) Hempseede: and as you cram and seide Capons so you may fat, cramme or seide Hens also and in a shorter space, also you may cramme Chickens sooner then either of the both, as thus: first take them as soone as their dammes forsake them or that they be able to defend themselves, and put them into a Pen that is low & not too much cloyed with light, then take wheate meale Bar and all to mixing it with new milke, make a stiffe dowe thereof, & out of it

Making of  
Capons.

make



make your Crammes, then steeping them in milke, cramme the Chickens therewith, Morning, Noone, & night; & haue great care to make your Crammes very smal for feare of choaking: if with your wheate meale you mixe a little fine Datemeale flower, the Crams will be the better, & the Chickens will fede the sower, howsoever in fouetene dayes they will be as fat as they can wallow: there be others that fede them with Toasts that are taken out of strong Ale or Beere; others fede them with wheate Bran scalded; but then they must haue great stoze thereof in such wise as it may lie continually before them, neither must they want water at any time.

The Capon  
to leade  
Chickens.

Now whereas before I spake of Capons, their caruing, use, cramming, & benefit in þ dish, yet here you shall understand that they are excelent for another purpose also, that is to leade, to breed, to gouerne & defend, both Chickens, Ducklings, Turkeys, Peahens, Pheasants, Partridge, or indeed any fowle of their nature, which he wil doe (being aplied thereto) as naturally, as kindly & more sufficiently then any Hen whatsoever; the greatnesse & largenesse of his body, being much better able to cower them, & his strength of greater force to defend them, so that you shall see these Capons leade thirtie, nay fortie of the severall kinds of fowles formerly spoken of, neither after he hath once taken unto them, dare either Kite or else Buzzard assault him. Now the way to bring him to this natural affection (before spoken of) you shall take a good Bunch of Arsmarte & crushing it a little, aswene as you see the Dullen begin to go to their Roost, take þ Capon & baring his brest, rub it all over with the Arsmarte very hard, then in the darke put him to Roost & very privily steale & place the chickens under him, whose warmth will take away the smart which þ heat he had caused, insomuch þ presently he will fall in love with them, yet if at any time you finde he beginnieth to neglect them, then presently that night rub him againe, & then be lene if he will never forsake them; there be some housewives that instead of Arsmarte take Pettels and Pettle him, others take Spearegrasse & rub him with it, others wil neither use Arsmarte Pettles, nor Spearegrasse, but only take a fine yong Wyer and therewith beate & pricke all his brest over, & there is none of these but will effect the woorks, only the Arsmarte is the best & safest.



If you would have great Egges, Leoneus teacheth to beate Of Egges  
into powder Bicke, or Flanders Tile, and mingling it with  
Cheffill and Wine, to make it in Dole, & giue it to your Henne,  
The Egges of Pigeons, Gals, Pecoeks, and Turkeys, be all  
white: the Egges of Water fowle be graminish, and pale: the  
Ginnie Hennes Egges be like the Pehennes in all things,  
saying that they be speckled as the Turkie Pens. The Phea-  
sants, and the Bustrils Egges, are reddish. The Egges of all  
fowles (as Plinie saith) are of two colours, wherein the Wa-  
ter fowles Eggs, having a great deale more yolke then white, &  
that more blacke then others. The Egges of Fishes, are all of  
one colour, having no white in them. The Egges of Birds are  
by reason of their heate, brittle: and Serpents Egges by  
reason of their coldnesse, tough: Fishes, by meanes of their  
moisture, soft in laying, the round part of the Egge commeth  
first out, the shell being soft, and presently after hard: what  
forme soever they haue, the long are most commended, as wit-  
nesseth the Poet: The Egge in fashion framed long, & of them  
(as I said before) is brought forth the Cocke Chicken, as of  
the round ones the Henne, though Aristotle be against it. Some  
Pens doe lay very great Egges, and those most times with two  
yolkes, having the shell divided as it were with a circle, which  
both Aristotle writeth, and our experience approbeth. Some  
doe lay double, and hatch double: some are so fruitfull, as they  
lay great numbers at once, some every day, some twice a day:  
some are so fruitfull as they kill themselves with laying. In the  
middest of all Egges, there lyeth as it were, a droppe of bloud,  
which is supposed to be the heart of the Bird, which is the first  
in all the body framed: the body it self is wrought of the white:  
the sustenance is the yolke: the head, while it is in the shell, is  
bigger then all the body, the eyes shut up more then the head.  
While the Chicken increaseth, the white goeth to the mist,  
and the yolke compasseth round about.

Egges are preserved in Winter, if you keepe them in Chaffe, Preseruing  
of Egges.  
Straw, or Leaves: and in Summer, if you cover them with  
Branne, or Wheat: Some doe cover them before in fine bea-  
ten Salt, for the space of five houres, and after wash them and  
lay them in Chaffe, Straw, or Branne. Others againe cover  
them

The Hen-  
house.

them in Beanes, and some in Beanne flouze, & some in heapes of Wale: but Wale, as it suffereth not the Egges to corrupt, so it greatly diminisheth the substance of them. Your Hen Houses must be made in that part of the House, as lyeth in the Winter toward the rising of the Sun, and ioyning as nere as may be to some Hill, Oven, or Chimney, or to the Kitchin, so as the smoke may come amongst them: for smoake is very wholesome for this kinde of fowle. And that was (I thinke) the cause that the old people made choyse in their quit-rents of smoke Hennes, as of the best, as it appeareth by old Rentallies. Let the front of your Henne house stand alwayes towards the East, & to that Coast let the dore open. Let the inner rooms be well furnished with Rosts, and Ladders, and small Windows opening Eastward, at which your Poultry may fly out in the morning, and come into the Roost at night. Take that you make them close at night, and let the Windows be well lettrailed for feare of Vermine. Let your nests and lodgings, both for laying and brooding be orderly cast: and against every nest and roosting place, place streppes and boordes to come up by, making them as rough as may be, that the Vermes may take good hold when they fly up to them, and not by their over-smoothernesse, be forced to flutter, and hurt their Egges. It shall not be amisse, if you parget the house both within and without with good Plaster, wherby neither Wezell, nor other hurtfull Vermine may enter in. Woored flouzes are not for fowle to roost upon, which almost all kinde of Birds refuse, because of the hurt that they receiue by their dung, which if it cleave to their sate, breedeth the Gout. And therefore to rooste upon, you must make them Beatches, which Colugella would, should be made faire square: but it is better to haue them round, so that they be not too farthe for them to take hold by. Let the Beatches reach from one side of the wall to the other, so as they stand from the flouze a fute in height, and two fute in distance one from the other: and thus haue you the fashion of your Henne House. The Court wher they goe, must be cleane from dung and dirtinesse, not having water in it, saving in one place, and that must be very fayre and cleane: for if it be puddle, or durtie, it breedeth (as I saye before) the Wippe. To keepe their water cleane, you may haue sayde

Earthen

Earthen or Stone Vessels, or Troughes of Wood, covered on the toppe, in which there must be severall holes, so bigge, as the head of the fowle may easily enter: for if you should not keepe them thus covered, the Poultrie would in their drinking defile and poison it with their dung. Their meate must be given them betimes in the morning for straying abroad, and a little before night, that they may come the timelier to their rest. Those that be in the Cope, must (as Columella saith) be fed thrice in the day: the others must be used to an acquainted voyce, that they may come at the calling. The number must be well marked: for they soone deceive their keeper. Beside, you must have round about by the walles, good plenty of dust, wherein they may bath and poynt themselves: for as the swine delighteth to wallow in dirt, so doth this kinde to bathe and tumble in the dust.

And thus much touching the Dunchill Cocke, Henne, Capon, Chicken and Egges.

I will now proceede to a creature, of a much more excellent and heroycall nature, and such an one as the Ancients for his height of spirit and greatness of minde, made the onely Companion of the god of Warre, and that is the fighting Cocke, or Cocke for Battails. And the rather I undertake this labour, because I see the great height wherunto this Pastime or Recreation ascermeth, the many iudiciall and most expert knowledges which are frequent with all the mysteries hidden in the Arte, and with them I poynt the infinite that are lovers of the same, and would lose it with greater seruenicie, had they any small light or induction to leade them through the darke pathes and obscurities of the Arte: which since no man of better skill will undertake, I am bound to breake the Ice, as I say something of that which those which can say better, will say nothing; and yet I doe not lay downe Rules, but onely frame conceits, and if at any time heretofore I have gone astray in this Arte, I now endeavour to finde out the best way, and to recall mistakes.

First to speake something of the nature and dignity of the fighting Cocke, the Ancients, as Plinie, Colomella, Varro & others affirme that of all fencible Creatures they are the most valiant, of the highest spirit, and the most constant and uncontrollable in all

Of the fighting Cocke

Their nature and dignity.

all their actions. For their valour it is so infinite that they end their battailes onely in certaine death, and though the Conquerour sound his owne triumph in clapping his wings, & crowing, yet the Conquered even to the last gaspe will shew all the characters of resistance, shewing that howsoever his Body may be subject to Fortune, yet his minde can acknowledge no such deitie.

Height of  
Spirit.

For their height of Spirit they are sayd to be the proudest of all Birds, so; their pride abateth at no obiect. The Peacocke pulls downe his Plumes at his blacke saete, but the fighting Cocke advanceth his crest and shewes himsele most glorious even in the face of the Lyon, insomuch that it is sayd the Lyon trembleth at his presence: they are so great lovers of Glozy that they make themselves their owne Idolls, and have such a naturall understanding of Glozy that they both apprehend and delight in mens praises.

Constancie  
in Actions.

For the constancie of their Actions, they are so unalterable in all their Customes, that they seeme to compare with the Sunne and Moone for perseberance. They are said to deuide the night (by their Crowing) from thre houres to thre houres, and are such naturall Astronomers, that by one Action or other they discover the Motions and Influences of the Heavens; They are called the Sentinels of the Night, the breakers of mens sleepes, and by Saint Gregorie himsele they are called the Messengers of day, the deviders of houres, and the examiners of the Night.

The Digni-  
tie.

Touching the dignitie of this Birde, they were held in such singular Reputation amongst all the Magistrates and Senators in Rome, that they receiued all their Omens, Augurizmes and prophesies of good or ebill fortune, onely from this creature. Say the Emperours themselves did so farre Idolatrize & adoeze this Bird, that they would take no Action in hand either of Warre or Ciuill government, they would neither goe forthward to any enterprise, nor recople from any danger, but onely as the actions of this fowle gaue them directions, insomuch that the poore Intrails of this small thing was helde in Sacrifice of greater valew then the whole Body of the greatest Dre.

The Anti-  
quitie,

Now for the Antiquitie of this pastime or recreation (for I can giue it no greater epitheton) some would haue it as ancient

as

as the Olimpicke games, and that from the imitation of these Birdes, the Gladiators or Fencers first invented and put in practise the arte of Swoorde play; and sure it is not unlikely, for the first two Cockes that ever were bred, would give notice of their nature, so that the sonnes of Noah could not chuse but make use of their enmity: but leaving Coniectures I finde both by Plinie and others that in the Infancie of the Roman commonwealth, there was yearely held at Pergamus a solemne triumph: meeting onely to behold Cockefight, which continued for divers dayes, having the resort of all the Nations that dwelled about them, and hence it came to be dispersed farre and neare into other Countries; and so: my owne part I doe not finde (in this kingdome of ours) any monument of pleasure whatsoever more auncient then the Cockepit.

Now for the choyce of the Cocke for Battell, there are divers opinions, and great differences in those opinions, for some onely chuse him by his shape and proportion, coveting neyther the Gyant nor the Dwarf, but Alexander size, a meane amongst men, and this is good but not absolute, for a large Cocke that is couragions and sharpe hield, will command Conquest, and the dwarf will shew fine play and give delight to the beholders: Arte and Nature ioyning to defend and supporte weakenesse.

Others chuse by the colour as Gray, Yellow, Red, Dyed, White, Dunne, &c. As if vertue were in feathers, but this is curiosity, for there are good Cockes of all colours. And as in Rome the best Cockemasters did not aske you of what colour is your Cocke, but of what Country was he bred, whether at Rhodes or at Tenagra, for there was the best breede, or else at Melos or Chalcis, for those were indifferent, and accordingly they gave them estimation, so our best Cockmasters question not so much the plume as the place of Breede, and the true descente and pedigree from a valiant and fortunate Generation.

Others chuse their Cockes onely by their Courage, Anger and impatience, or by their high lookes, pride and maiestie; but these are all deceyvable, for none is so impatient as the dunghill till he smart, nor treads with more maiesty so long as he walkees not out of his owne knowledge.

The best  
Cocke, j

To make choice then of the best Cockes; above all things be sure that he be truly bred, from a perfect Cocke & a perfect Hen, for if there be falshood in eyther, the whole generation will be cowards, and of the two a fault may better be borne in the Cocke (so he have a good hēle) then in in the Hen: for other outward Characters there is required in the Cocke a sharpe small Snake head, which art must doe not nature, as shall be taught hereafter; a maiesticke pace and countenance, a strong round Body, a full Thigh, a big Legge and large, well bended, sharpe Spurres.

Choyce of  
the Henne,

Your Henne must be as perfectly bred as your Cocke; touching her Plume or Colour it skils not, her head would be small, her eye very chearefull and her Crowne armed with a double Coppell or Crownet; her body would be large, for so she will cover her Wyde the better, and the feathers on her back would be long and downie, for that is most comfōrt to the Chickens: if she want her hinder clawes she will lesse offende her Egges, if she be armed with Spurres it shewes courage; if she have no Spurres it is better for her Wyde and no impeachment to her valure. Lastly, like that she be a painefull layer, a willing Sitter; and about all things, loving and kinde to her Wyde when they are brought forth.

Best times  
for breede,

Touching the best times of Breeding these Cocks of kinde or Cocke of the Game, there is amongst Cockmasters great diversity of opinions; some allowing onely from the increase of the Wyne in February to the increase of the Wyne in March; affirming that one March Wyde is worth three of any other Season: and sure I do not much disallow the reason, if the season of the yeare, the place of breeding, and all other accommodations doe concurre and agree with the tenderesse of the things Bredd; But say other Cockmasters, the peevish disability of these is so great, their naturall pronenesse to sodaine sicknesses, their unapt constitution for the receiuing of the smallest Colde and many other accyidents which happen unto them, as by stormes, and tempests and greafe windes, that this season is held somewhat too early, and they rather allow from the increase of the Wyne in March, to the increase of the Wyne in Aprill; But laying the nicer  
cui-

Curiosities aside, it is found by certaine experience that you may Breed these Birds at any time from March till June, observing (as neare as you can) so to set in the increase of the Spone, that they may be disclosed in the increase of the Spone also.

You shall place the Nest wherein you would have the Henne sit, in some warme darke corner neare to which the ayre of the ster may come, yet in such wise as no other Pulleine or Fowle whatsoever may have recourse thereunto, or that shee may cast her eye upon any thing of her owne kinde; for these are angry creatures and any thing moves them to displeasure, and makes them forget their Nests. For the manner of making her Nests, you shall first lay a prettye thicke bed of drie sande higher on every side than in the midst, then over it a good thicke layre of course wallflocks or hayre well washt and dyed, then aboute it a good thicke Bed of Straw, padded and foulded close together and made hollow in the middelt, yet so as it may be rather flat then hollow in the bottom: here you shall place your Egges close together so as the Henne may at ease cover them, so: to lay more is not onely losse, but also hurtfull unto those shee both Cover. The number of Eggs must be proportioned according to your stoze; as if you have many you may set many, if you have few you must set few, yet according to the housewives rule you must ever set an odde Eg, as nine, eleaven, thirtene or fiftene: which howsoever some doe it after a superstitious manner, yet there is a strong and necessary rule for the same, for seeing the Egges must lye round and close together; without this odde Egge which maketh and filleth up the Center, it is impossible by an even number to lay them in so good order.

Now there be some which after the Henne is thus set, will not trust to her painfulnesse and care in the vieweing and disposing of them, but will themselves in the Hennes absence turne the Egges. But except grosse neglect be perceived, this I hold a worke of Supererogation, and may very well be spared, for Nature is a Mistress that will hardly indure controullement, nor did I ever see an Egge moved that the Henne hath not againe



of her owne accord removed; therefore during the dayes of her sitting which are not above one and twenty, trouble her with nothing, onely see that she be accommodated with all things necessary, as meate, water, sande, dust, fine ashes, small Crabell and the like.

The prefer-  
vation of  
weake  
Chickens,

When her time of disclosing commeth, then you cannot be too rarefull nor too curious, because her love to her Egges in generall, may make her neglect her dutie to those which are first disclosed in particular, therefore if you see any such neglect, then take away those which are first disclosed, and having a soft Bore lyned and covered over with Miniver furre, put them thereinto and set them within the ayre of the fier, and it will preserve them as well and as naturally as if the Henne did her best duty unto them; and thus you may keepe them safe till the Henne have disclosed all her Egges, and then put them under the Henne againe: now if you have not Miniver furre, then the next best thing to preserve them in is a Swanskinne, and the way is walle, yet when extremity compels you must make use of it. These Chickens must be kept in a close warme boarded roome till they be at least sixe weekes old, and not suffered to goe abroade in the ayre, and during that time you shall feede them well with small Datemeale unbruised, and fine Chilter wheate well bruised; you shall let them have both water and new milke, and in the places where their meate and water is, you shall have small pins made fast in the boards, to which you shall binde prettie big bunches of greene parcels on which they may picke and tyer at their pleasures, and there is nothing that doth more preserve them from the blacke so-daine sicknesse to which these creatures are wonderfull inclined, in so much that you shall have them (to your imagination) pleasant and healthfull and full feeding, in the morning, and before none they will drop downe and die, and nothing to be perceived more then an extraordinary blackenesse about the head, and therefore I would wish you daily to view them well, and when at any time you finde any alteration or show of blacknesse then presently to perfume them well with Penicoyall or the stalks of Gallicke burnt, so as the smoake may lie all about them, and to let them have a little more ayre of the fire, for colde.

colde and soule feeding onely breedeth this infirmity.

After they be six weekes old, you may turne them abrande with the Henne into some sweete Gardeyn, Orchard, or some other gras-plot, and onely house them at night.

You shall not wayne these Chickens, till you see the Henne begin to neglect them and that they neglect the Henne, which you shall perceiue by their stragling from her and by finding Khouls for themselves without her company.

Presently upon their forsaking the Henne (or before) if you perceiue (as necessarily you must) that either the Combe or Wattels doe, appeare, presently heate an olde knife red hot in the fire, and with that part of the backe thereof which is no broader then the Combe, seare downe the Combe and Wattels and annoynt them with Frankensence & Butter beaten together to agentle Salbe: then when the Asker or Scabbe (which was caused by the searing) both arise or fall away, then dry up the Soze with a little Potters earth made into powder, and dusted thereon; and this will make them haue extraordinary fine small and cleane heads.

At six moneths olde you may send your Cocke chickens to their severall walkes, as to Lodges in Parkes or Warrens, to graunge houses or houses remote from neighbours, to dayries or shepcoates where sheape are usually spiled, to spilles or other places which are remote and free from the annoyances of other Cockes or the resort of euill vermine, especially (as neare as you can) let their walkes be free from stinking muddy ditches, stinks and common Selders, for nothing is more unwholesome.

In ancient times they would allow a Cocke but three Hennes at the most, but we finde by experience that five are no more but a competent number.

A Cocke would not be put to Battell, nor held from Battell by the number of yeares or dayes of his age, but by the maturity of his strength, length and compleate perfection of his weapons: & although our forefathers would allow none for fight under two yeares old, yet we see now in these dayes that some Cocks will be fully armed & haue all the perfections of nature much sooner, & will fight on their battels with greater spirit & more danger to those

Dubbing of  
Chickens.

which are longer ere they come to the triall of their vertue, therefore let it be your rule that as soone as you see your Cocke sufficiently armed, and that there is no further hope of better weapons, then boldly to turne him into the list to try his fortune.

Of the  
Cocks  
perch.

There hath bene great disputation amongst our Cock masters Concerning the Cocke-perch whereon he is to sit, some affirming that it availeth much to the bettering of the Cocke, & I am of the same opinion; yet altogether without the list of curiosity, onely I would have you observe that the Perch whereon your Cocke sitteth when he is in his walke among his Hens, would be of a round thickenesse, as three inches, or three inches and halfe in compasse, which is convenient both for him and his Hens; and the length would be such that it might receiue him & his Hens to sit about: But for his perch in his private Denne (when he is in seede for a Battail) that would be foure inches and a halfe or nere five inches in compasse, in length betwixt seaven and eight inches, and in heighten, & it would be so made that it might be moved from corner to corner in the Den, according as you finde the cocke best affected, and Denne placed.

Preparing  
of Cocks  
for the Battell.

Now after your Cocke is thus bred and brought up: If you intend to have him prepared for battell (which is a Recreation, which continueth all the fall, winter and the sopping) you may at your best convenient leisure take up your Cocke or Cokes so many as you intend for the sport, and put them into severall Dennes, and though a sponeth, fire, seaven or eight weekes, be a time sufficient for the preparing of any Cocke; yet if he be in true and good keepe, the longer he is fed the better is his performance: as one as you have brought him to his Den you shall for three or foure dayes or a weeke, if you please, feede the Cocke both sponing, sone, and Evening, (for these onely are your feeding times and no other) with any course Wheate Bread (and the courser the better, so it be not mixt with any other graine) so; it is strong and cleareth. When when you finde (as his excrements will shew unto you, which will be changed both Colour and substance,) that all the foule roode which hee getteth all his walke, is thoroughly scoured out of his bodie, you shall then to procure him the better strength and  
 Strength

Breath, take him and another Cocke (which you doe not esteeme and that is not fully his match) and putting Hottes on their heels, which are armours or defences to keepe their Spurres from wounding them, and are made sometimes of Leather and Wumbast, or other strong Russe and Wumbast, yet the best of all other are those which are made of beluet & pure, fine Cotton wolle; and with these Hottes let them fight, spurre and cuffe one another a good prettie space till they beginne to grow wearie and fall to taching; then part them and taking the Cocke (which is in dyet) into your armes, give him a couple of bigge Houlls or lumps like to Capons Crams, of Mellow, graine Bone, Butter and Sugar-candie beaten together in a mortar to a past, and then presently put him into a close Basket, with straw both abode and underneath him, and so let him dworne and sweate till the evening; so as the Sparring and exercise breatheth and melteth the Greasse, so this scowering avoides it from the Bodie, and keepe the Cocke strong and healthfull.

The best  
Scowering.

At evening when you feed your other Cocks, take those which you sparred in the morning out of their scowdes, & having shaven their heads over with a fine soft sarcenet rag moistened with the oyle of bitter almonds, put them againe into their pens, then having cut them a sufficient quantity of the first course Bread, take their Bread troughes and put into the bottoms of them a little fine chalke beaten to powder, and above it the Bread and so let them feed at pleasure; others use to put with their Bread the new swaine urine of a Boy, and it is good, but the chalke is a great deale the better.

Having thus fed and exercised your Cocke for a weeke, you shall afterward during all the whole time of your feeding, let him eat nothing but the finest and whiter Panchet that you can buy, and cutting away all the crust both above and below, and as at this time, so at all times else to whatsover, be sure that your Cocke want not water, and let it be out of the clearest fontaine you can finde, for nothing is so unwholesome as corrupt and unpleasant water; If in a great quantity of water you dissolve a little of the best Juice of Licorise and so give it your Cocks, it is a great preserver and fortifier of the kinde, also to let betwixt their Troughes little bundels of herbe of grace,

whereon

whereon they may pecke at pleasure, it will keepe them from  
Poyres, Catarres and Rheumes.

There be some that make speciall Cocke-bread in the man-  
ner of flat Cakes, of Emprat flower, Oatemeale flower, old Ale,  
whites of Egges and butter; but neither this nor any other  
Bread whatsoever is better then the pure old right Spanchet.

Will a fortnight before your battell, you shall obserue your  
Sparreing dayes twice a weeke, or oftner, feeding and feeding  
as was before shewd; but when the time shal cometh so neare  
you shall no more sparre him, but onely chase and course him  
up and downe in some graine and even field by shewing him a  
Cocke, and then running away from him, then shewing him  
again and running away againe, and now and then suffering  
him to haue a blow or two at him: thus you shall keepe your  
Cocke in breath and nimblenesse, and neither make him sick  
or sore; but this you shal not doe aboue twice in the week at most.

Of match-  
ing.

When you haue thus got your Cock strength by feeding, & winde  
by exercise, your next care must be the matching of him, for to  
give to his enemy advantage, you give not him halfe his courage.

Of advan-  
tage.

Advantages consist in length and strength, that is, in Tal-  
lesse and Thickenesse: if his aduersarie be too high for him,  
how shall he reach his head: if he be too strong for him, how  
shall he beare his blowes: therefore in neither of these give  
edges. The first of these you may iudge by your eye, the other by  
the gripe of your hand, but if you be doubtfull or unskillfull in  
either, then rely upon the iudgement of those which are both  
faithfull and skillfull.

Of the Bat-  
tell.

When your Cocke is equally matched, it is then your part to  
give him all the naturall & lawfull advantages, which may a-  
vail for his conquest, as first to disburden him of all things su-  
perfluous, as extravagant feathers about his head, the long fea-  
thers of his Wings, & beir from the head to the Shoulders: this  
must be done as close to the necke as may be, for the least feather  
his enemy can catch hold on, is a ladder by which he will rise to  
descrie him; also the small feathers about his rumpe & others of  
like nature: As thus he takes away things superfluous, so you  
must adde to those which haue any thing wanting, as if his  
Beake be rough, you must smooth it but not weaken it: if his  
Spurres

Spurres be blunt and cindred, you must sharpen them & make them so peirring that on the smallest entrances they may run up to the very beame of the leg it for his wings you must make the like the wings of a Dragon, every feather like a poyard, stabbing and wounding wheresoever they touch: this done rub his head over with your owne Spittell & so leade him to Fortune.

Now because these battayles are ever for the most part mortal and end in death, I will give you those cures which many times may prevent death, and at all times give helpe for those wounds which are curable. And first I will begin with the eye, because it is ever in the greatest danger & the ofttest blemished therefore when your cocke hath received any such blemish, first with your mouth sucke away the blood and lick the Eye cleane that you may see the woork of the wound, then take two shewellfull of Hirc Gillings Beere that is cold and cleare, and halfe so much life Honey, and having mixt them well together, warme it on the fire, and therewith wash the Cockes eye twice or thrice a day till it be whole.

The cure of Wounds.

Hurts in the Eye.

If your Cocke (as it is a common mischance) happen to beate himselfe, and so by the flux of blood faint and so lose the Battell, presently take him up, and having found out the beane drop a little hard waye thereupon & it is a present cure, but drop not on the way burning hot, but onely so melted that it may stick & no more.

Of Veining.

For any wound whatsoever in generall which a Cocke shall receive eyther in Battaille or otherwise, first sucke out the blood well, then squirt into the hole warme white wine; after drop the wound and stop up the hollownesse with Frankensence and sweet Butter beaten together to a very gentle Masse, as was before shewed unto you.

Wounds in generall.

Cockes after Battayle are wonderfully subiect to Impostumations, partly by the deepe hollownesse of the wounds they receive, partly by the smallnesse of the orifice made by the Wound, which closeth before the bottome be scowred, and partly by the ootherhalnesse of their keepers which will not take leasure in their cures; Now to know these hard impostumations (for Cockes have not any that are soft) when you looke and search the Cocke, if you finde about his head or other parts any knobbes or harde swellings which are of a cloudy rednesse with

Of Impostumations.



with a little blacke specke as bigge as a pinnes head; presently with a sharpe porthnife open it and thrust out the choise which will be thicke and white, then sucke it to leaue no corruption behind: and lastly fill up the hole with the former salbe of Frankeincense; and so turne him abroad.

Many other casualties may happen to fighting Cockes, but these cures will set all safe.

I will now speake of Geese, and Ducks which are of the number of those that are called Amphibia, because they live as well upon the land, as the water. And because the keeping of Geese requires no great labour, it is a thing not unmeet for the Husbandman, for that (if hee have place commodious for it) it is done without any charges, and yieldeth good advantage both with their hooes and feathers.

Whosoever they are a very good dish for the Table: yea, being more watchfull then the Dogges, they give warning when you sleepe. And therefore they were with the Romanes had in great honour, because they with their gagging betrayed the enemy, that otherwise in the night time had taken the Tollme. Plinie writeth of a Goose that would never be from the Philosopher

The choyce. Lacydes. Your choise must be of those that be of the fattest kind: Varro liketh best the white ones, which colour was most esteemed in the olde time, as appeareth by the presents that were given: the same Varro accounteth the gray for a wilde kind. They are kept in Marshes, Fennes, Lakes, and Marshy Commons: for to Corne ground, Meadows, and Pastures, it is a very hurtfull fowle: he biteth what oether young sowing he may reach, and what he once hath bitten, will never lightly prosper againe: besides, he stretcheth the ground which is unprofitable, or rather most hurtfull dunging: wherefore (as I said) it is best to keepe them in Fennes, Lakes and Marshes. If you have store of such ground, you shall doe well to keepe them: for you cannot well keepe them without good store of water and pasture. When you make choise of your Gander, let him (as meane as you can) be knabish & unhappy; for they will best defend their Coylings: and for his colour white or gray are the best, pide are but indiffer-  
 Their man- rent & blacke are naught. The Goose delighteth in such meat  
 as is naturally moist and cold, & shunneth naturally such things



as are hurtfull for her, as the lease of the May, and (as Alianus  
writeth) the Oxander: the best & meetest time for them to breed  
in, is from the Kalends of March, to the tenth of June. They  
tread most commonly in the water, while they swim in the Ri-  
uers, or fish-ponds. Columella would haue you keepe for euery  
Gander, three Gese, thinking by reason of their unbeluiness,  
this number to suffice: within your Court, you must make them  
to: their better safety, seuerall, and secret pennes, in sundry parts  
thereof, where they may sit and breede. Some would haue the  
Gese, coome framed in such order, as euery Gese may haue a  
place to her selfe: which, if any man thinke too trouble some, he  
may make one sufficient wide coome to serue the all. The places  
where they shall lay, must be drie, and well streiued with straws,  
or such soft matter, and well defended from vermine. The Gese  
must not be suffered to lay out of her nest, but when you shall per-  
ceiue they seke it, you must grope them, and if they be with  
Egge, which you shall easily feele, then shut them up in their  
nests, which you shall not neede to doe aboue once, or twice: for  
where she hath once layd, she will alwaies of herselfe seke to  
be. They will lay (as some hold opinion) thise in the yere, if  
they be not suffered to sit. The Egges of Gese, and Swannes,  
were used (as Alianus witnesseth) as a most daintie dish at  
Bankets, among the Kings and Princes of the Indies. Aristotle  
affirmeth, that the Gese alwaies useth to sit, and neuer the Gan-  
der, contrary to the order of many other fowles, continuing al-  
waies till she haue hatched. After the last laying, you shall  
suffer them to sit, and marke every ones Egges with a seuerall  
marke, that they may be set under their owne Gese: for it is  
thought they will neuer hatch a strangers Egges, without she  
haue her owne under her. Of Gese Egges, as of Penne  
Egges, you shall (as I said before) neuer set under a Henne  
aboue five, nor under this: but under the Gese you shall set at  
the least seven, and at the most fiftene. You must keepe to  
lay under your Egges, the rates of Pettles, which they say pre-  
serbeth them against the stinging of Pettles, which other-  
wise many times killeth the Gosling, if they sting them. The  
Egges will not be hatched if the weather be cold, before the  
thirtieth day, if it be warme, in lesser time: but be it for the most

Their breed-  
ing time.

part, the Gosling is hatched the thirtieth day after the sitting. Some doe use to set by their Nets Barley strepes in water, as Gault, whereby the Goose shall not be forced to be any while absent from her Egges. When your Goslings are come forth, you shall for the first ten daies feede them with the Goose in the Nest. Afterwards, when the weather is faire, you may suffer them to goe abroad, taking good heede that they be not stinged with Nettles, nor that you let them goe an hungred into the pasture: but to give them after they goe abroad the leaves of Endive, or Lettise chopt, to allwage their hunger: for if you put them an hungred into the field, they straine & breake their owne necks, with pulling at the tough and stubbous weeds, by reason of the sudden starting backe againe of the weede. The Goslings of divers breeds must not goe together, nor be shut up together, for hurting one another. When they be foure moneths old, somewhat before, is best time for fattening them: the younge are soonest, and easeliest fatted. If you give them ground Malt and Wheate strawe, you neede give them nothing else, so you let them have drinke enough, and keepe them from going abroad. The Grekes bid us to put to two parts of ground Malt, foure parts of Wheate, tempyng it with water, letting them drinke thys a day; and at midnight. Yet this manner of feeding is better for the young Goose which we call the Grene Goose, then for the elder sort of Goose which we kill at Michaelmas and Christmas. The grene Goose may be put to feede at a moneth old, & will be thowse fatt in an other moneth especially if you feede them thrice a day with boyld Dates, and give them good strawe thereof, and instead of water give them milke or at least milke & water mixt together. Now for the fattening of the elder Goose, when the stubble fields are spent, you shall close them up in close darke pens, & feede them morning none, and night with good strawe of sweet drie Dates and ground Beemes, or else with Rye malte and scalded wheate, & for their drinke let them have water made white with Barley meale, and thereof let them have good strawe; and thus doing you may have a Goose sufficiently fatted in one and twenty daies. If you would have their Livers soft and tender, you shall mingle dry Figges, well beaten with water, and

Fattening  
of Geese

17

making

making pellets thereof, cram them with it for the space of seaventeene or twenty dayes. The Jewes at this day, being the skilfullest feeders that be, doe use a strange order in the satting of them, wrapping the Goose in a Linnen Apron, they hang her up in a darke place, stopping her eares with Ipeasen, or some other thing, that by neither hearing, nor seeing of any thing, she be not forced to struggle, nor cry: after they give her pellets of ground Salt, or Barley steeped in water, thise a day, setting by them water and gravell, by which manner of feeding they make them so fatte, as the Liber many times commeth to be five pound in weight. Whilst I was at the Councell of Wormes, there was a Liber of a Goose brought me by a Jew, that weighed foure pound. Plinie is also a witness of the greatness of the Libers of fat Geese, affirming, that they will grow after they be out of the bodie, being sprinkled with milke. The common order of satting with our Countrey people, is to shut them up in a darke, and a narrow place, and to set before them Barley, or Bech wheate, giving them water, with a little sand, or gravell in their Troughes: and with this order they have them fat in foureteene dayes. After harvest, they will be fat with the Grotten, or Stubble. Now touching the profit of their feathers, which are of great use both for the Scrivenars, the Fletcher and many other purposes; howsoever the Ancients perswade you to pull, clip, or cut them twice a yeare, yet let me advise you to the contrary, both because the seasons of the yeare (which are Aprill and October) answer not the worke, as also because you disable the sight of the Goose and make her subiect to all her foes, as the Foxe, and other vermine; and besides by uncloathing her in the winter strike the colde into her body which kills her suddenly, therefore to prevent these mischeives, stay till the moulting time, when nature doth that kindly which you would doe unkindly, or till her death when she yields you the Tribute of all she hath, and then you may take her feathers and use them at your pleasure.

Now for the diseases which are incident to these foule, they are few, and kinde: but one of any moment, and that is the Gargill, which is a very contagious and mortall disease, stopping

ping the head in such a sozt that in a moment they fall downe dead. The cure is to take three or foure cloves of Garlicke and bzuisling them in a Porter mixe them with the fine searst powder of Clicampaine and sweet Butter, and so make them into pretty big long roulees like Cranes, and so give them to the Goose in the morning fasting, and then shut her up into a close Pen for two houres after; and this is enough for a Goose\*.

Ducks,

Ducks and Teales are to be ordered in like manner almost as the Goose, saving that they delight more in waters and Marshes: and therefore you must force some Waters, Lakes, or Poles, for them, whereunto they may easily goe and swimme, and dive at their pleasure. Columella would have a Court for the nonce for them, where no Cattell use, and nere to the house, round about the which you shall build for them little handsome Koomes, three fote square, with pretty doores to every one of them: which when they breede, you shall keepe shut. Hard by, you must have eyther some Pond, or River, wherein (as I said) they may swimme: for without the helpe of the water they can as evill live, as without the land. It is good also to have nere unto them, some good Pasture, or Meddow, or to set about the Ponds or Rivers, such Hearbs as they best like; as Clader, Fenegræke, Endive, Lettuse, and such other as they most delight in, and wherewith their young doe well fæde: beside, you must give them Dates, Barley, and other Corne in water. There is nothing that they more love then Acornes, nor that better satteth them. They delight wonderfully to be amongst Reedes and Sedges, wherein they may lye safe from rabenous birds, but so, as there grow no great stalked wædes, that may hinder their swimming: for they delight greatly to play themselves in the water, and to stribe who can swimme fastest, when the weather is faire and warme: for as they love such places where they may best prey upon the creatures of the water, so are they much offended if they be restrained of their liberty in swimming. In Winter, when the water is frozen, you must ply them sometimes with meate. They delight to make their Nests in some secret Coveit, but therein you must prevent them, and make their Nests in their owne lodging, or abroad, well covered and closed

closed with *Wades*: to which nest you must have some little  
 Juice, or gutter, by which you may every day potoze in water  
 and meate. Their fode must be (as I said) Oates, Barley,  
 Pease, Panicle, Millet, and Sperie, if you have any Roze.  
 They lay great Roze of Egges, wherewith, as with Goose  
 Egges, you may well feede your familie. The Egges of Ducks  
 and Geese, are kept in like sort as I told you of Hennes Egges:  
 and beside, in *Banne*, *Wheate*, or *Alhes*. They bræde in the  
 same season that Geese, and other fowles doe; about March  
 and Aprill. And therefore where you keepe them, you must  
 strewe sticks and straws for them to make their nests with-  
 all. Their Egges must be suffered to be hatched by them-  
 selves, or else removed and set under some Henne: for the  
 Ducklings that the Henne hatcheth, are thought to be gentler  
 and tamer. You must take good hærde, that the Egges which  
 they lay, be not eaten and spoyled by Crows and Pies, while  
 the Damme is seeking abroad for meate. If so be you have  
 Rivers and Lakes for the purpose, it is best to let the Dammes  
 bring them up: for when they be hatched, they will live very  
 well upon the water with their Dammes, without any charge  
 at all: onely take good hærde, that they be defended from Bu-  
 zards, Kites, Crows, and other like *Uermine*: but so pen use  
 them, as they will every night come home to the house: for it  
 is not good to let them be abroad in the night, for danger of lo-  
 sing them, and making them wilde. Yet it hath bene sære,  
 that such as have hatched abroad, have afterwards come home,  
 and brought with them a great number at their tails. When  
 I was Ambassadour in England, it was told me by men of  
 good credite, that there was in Scotland nære to the Sea cer-  
 taine trees, that yearely brought forth a fruit, that falling into  
 the Sea, became a kinde of wilde Ducks, or rather *Barna-  
 cles*, which though it seemed strange to me, yet found I Aristotle  
 a witnesse of the like, who writeth, that the River Hypanus in  
 Scythia, bringeth forth trees, whose leaves being somewhat  
 larger then Maple leaves, thereof commeth a kind of soure se-  
 ted Birdes.

Now as these tame Ducks, if you will preserve wilde Ducks, The Wilde-  
Ducks.  
 which are much & wholsomer fode & of greater estimation with

all

all Noblemen and Gentlemen, which are Faulconers as well for the readinesse and speedinesse of their spoyle, as also for the making of their young Hawkes (being ready Traynes) euer at hand upon any occasion; you shall then wall in some handsome ponde, moate or peece of riuer, and leauing the top open, couer it with a stronge Net, and plant about the Bankes great tufts of Dyers, Reedes and Bulrushes; then cut prettie intricate Slibes and holes in the Bankes where the fowle may hide themselves at their pleasures, for that onely will make them feede and forget their Imprisonment: besides they are excellent for their breeding, for the Wilde-ducke when she layeth will steale from the Drake and conceale her Nest; when she hath hatched she is most carefull and tender over her Broode, and requireth no assistance but her meate, which she must haue duly, haue fresh, and at least twice or thrice a day; and their meate would be the hinder ends of Barley or Wheat, scalded Branne, Fitches, Dates, Skegs and such like. The house henne will sit and hatch the wilde Ducks Egges, and the meate is esteemed the better, but the Ducklings are in greater danger of the Bite when they goe into the water, because the Henne cannot defend them. There is a broode of Wilde Ducks in the Low-countries which are called Coy-ducks, and are knowne by the greatnesse and flatnesse of their Bils, these after you haue acquainted and wonted to any place, and that they haue once bred, you may let them goe abroad at their pleasure, for there is nothing but death can keepe them from their owne home; and it is certaine that what Ducks soeuer they come in company withall, they are such inticers that they will bring them home with them be the numbers neuer so great, whence it comes that there is now in England great store of them, yet their first beginning was from the Netherlands. These Ducks are kept with a quarter of the charge that other Wilde Ducks are, because they haue liberty to goe abroad and shift for themselves. And in this manner as you keepe these Wilde Ducks you may keepe any other wilde fowle of their kinde, as Tayles, Plovers, Widgeons, Shel-Drakes, and the like.

The Coy-  
ducke,

Peacocks.

But now to Peacocks, which Birds, being more for pleasure then

than profit, are meete to be kept of Noble-men than of poore  
Husbands of the Countrey, though Varro writeth, that M. Aufi-  
dus Lucro, who first began the fatting of this fowle, made  
perely of his Peacocks foure hundred pound, whose example  
numbers following, the price of Peacocks grew to be great, so  
much, as their Egges were sold for halfe a crowne a peece, the  
Peacocks themselves, at foure Nobles a peece.

The flesh is neither good, delicate nor wholesome, but chiefly  
a dish for state and shew, being such if it be roasted neuer so dry,  
yet in foure and twentie howers it will gine againe, and be as  
raw as almost at the first roasting, no other reason being to be  
given therefore but the unwholesomnesse of their feeding, being  
a bird that delighth to eat newtes, Toades, Frogs, Adders &  
Snakes, whence it comes that he is called the Deuiler of the  
husbandmans pards and moze then his beantie to looke upon, &  
the ornament of his feathers for sundry purposes, I hardly know  
any other vertue in him. Hortensius they say, was the first that  
ever killed Peacocks for the Table in Rome, as a new dish at  
the Priests feast. To this bird, is ascribed both understanding,  
and glory: for being praised, he sets up straight his taile, and  
(as Plinie eloquently describes it) chiefly against the Sunne,  
whereby the beantie may moze be scene. His taile falling  
every yere with the fall of the leafe, he mourneth and creepeth  
in corners till his tayle be sprong againe. They goe abroad  
as Hennes and Chickins doe without a keeper, and get their  
owne livings, they be best kept in little Ilands: for they like  
neither his, nor farre off. Some thinke it to be a spitefull and  
ennions Bird, as the Goose to be shamefast, and that he deuon-  
reth his owne dung, because he would haue no man receiue  
benefit by him. He liueth (as Aristotle saith) five and twen-  
tie yeres: he breedeth at thre yeres olde, the Cocke having  
his feathers diuers coloured: he hatcheth in thirtie dayes, as  
the Goose doth, and layeth thre times in a yere. If the Egges  
be taken away, and set under a Henne, you must looke that  
those that you set under a Henne, be new laid, and that the  
Henne from the first of the Moone, be set upon nine Egges,  
five of the Peacocks, and foure of her owne. The tenth day  
after she hath sit, take away the Hennes Egges, and put under  
the



the like number of fresh Hennes Egges. They must be turned, and therefore marked upon one side. And so that you choose the greatest Henne, for if the Henne be little, you must take the lesser number of Egges, as three Peaches Egges, and six Hen Egges. When they be hatched, you must as you doe with the Henne, let them alone the first day: afterwards bring them out, and put them with the damme into a Pen, and feede them at the first with Barley flowze, sprinkled with water, or pappe made of any other Corne, and coled. A few dayes after, give them beside this, chopped Larkes, and Cruds, or fresh Cheese, the which well wung out: so the which is thought to be very hurtfull so: the Chickins. After they be a moneth old, you may let them goe in the field, and follow the Henne, tying the Pen with a long line, that she goe not too farre abroad but that the Chickin may come home in time. After the first moneth, you may give them Barley, and Bread: and after the seauenth moneth, you may put them to roost in the house with the other, not suffering them to sit upon the ground, but upon Peaches for taking of cold. And although when they were great, they chiefly delight to sit upon the toppes of houses, and be as the Cooles is, which are the best watchmen, and also the best warning givers in the night time: yet is it best for you to use them to sit upon Peaches in houses made purposely for them. Columella thinkes it not good to suffer sundry Hennes with their Chickins to feede together, because the Henne after the sixth a bigger then her owne, maketh the lesse account of her owne Chickins, and many times by that occasion forsaketh them. The Cocke, by the great lust that he hath to tread, breakes a sunder the Eggs that be under the Pen, and therefore it is best to have the Hens to sit as secretly as may be: they also use to beat and chase their owne Chickins, till they see them crested upon the head, taking them till then, to be none of their owne. The Cocke sufficeth for five Hennes, who by too oft treading, doth many times cause that the Egges neuer come to good. In warme countries they begin to tread in February, when setting up his taile round about him, taking himselfe for no small person, he beginneth to woe, & therefore at this time both the Cocks and the Hens are

are to be cherished with meates for the purpose to increase their lust, as Beanes tolled a little by the fire, and given them warme every fife dayes in the morning. The quarrellous and troublesome Cockes, must be severed from their fellowes, for hurting the weaker, and keeping others from treading. The Hennes must be kept so, as they may lay only in their houses, and every day groped for her Egges, and hardily looked to, with soft straw laid under their Bearches: for many times they lay as they sitte upon the Bearch. The diseases of this Fowle, and the remedies, are almost one with the diseases of the house Cocke and the Henne spoken of before, that is, the Dippe, and ill digestion. Their greatest danger is when their Coames come first out, for then are they paired, as children are in breeding of teeth.

Diseases.

The Ginnie Cocke or Turkie Cocke, though it be a stranger in other Countries, yet is very well knowne in England.

Some have supposed them to be a kinde of the Birds, called in old time Meleagrides, because of their blewish Coames: but these kindes have no Coames, but onely wattels. Others againe reckon them for a kinde of Peacocks, because that they doe in treading time after the same sort, spread and set up their tailes, wagging and vinting themselves: howbeit they neither resemble these in all points. But because this kinde of Fowle, both for their rarenesse, and also the greatnesse of their bodie, is at this day kept in great stocks, it shall not be much amisse to speake of them: for in daintinesse and goodnesse of meate, the Hennes may compare with any Fowle, and the Cocke farre excell them. The colour of their feathers, is for the most part white, blacke, or pied white and blacke, some blew and blacke. Their feete are like unto the Peacocks, their taile short, but spreading, and bozne up after the Peacocks guise, specially when they tread. The heads and neckes of them, are naked without feathers, covered with a twinkled skin, in manner of a Coble, or a Hade, which hanging over their bills, they wale up, as let fall at their pleasures. The Cocke hath the greater wattles under his chin, and on his breast a tuft of haire. The colour of that twinkled skinne about his head (which hangeth over his bill, and about

Turkie  
Cockes.

his necke, all swelling as it were with little bladders ) he-  
 hangeth from time to time like the Camalion, to all colours of  
 the Rainebow, sometimes white, sometimes red, sometimes  
 blew, sometimes yellow, which colours eber altering, the Bird  
 appeareth as it were a miracle of Nature. The dieting and  
 keeping of them, is in all things contrary to the Peacocks, de-  
 lighting in nothing that is not swete, cleanlie and wholesome,  
 as the best Corne and pulse, young springing up grasse, wormes,  
 young Snails and such like : the Stubble fields will sat them  
 as it doth the Goose, and if they may have libertie and a large  
 walke, they will thift for themselves without care-taking, only y<sup>e</sup>  
 Bird is a tender Birde \* & cannot away with cold and wet. It  
 is a Bird wonderfully given to breeding, every Cocke must as  
 the Peacocks, have foure or fife Pennes with him : they are  
 more so;ward in breeding then the Peacocks, beginning e;ther  
 the first yere, or at the farthest at two yere old: they begin to lay  
 in March, or sooner. In hot Countreies they lay great numbers  
 of Eggs, if they be continually taken from them, and set under  
 Pennes; and if so be ye you take them not away, they begin to sit  
 at the first : for they be of all others most given to sitting, and so  
 much, that if you take away all their Eggs, they will sit upon a  
 stone, or many times the bare nest. You must therefore re-  
 straine them of this desire, either thrusting a feather through  
 their nose (as I told you before) or by wetting their bellies with  
 cold water. You must set under their Egges as ( I taught you  
 before) in the Peacocks: for they have both one time of hatching.  
 The keeper must marke the one side of the Egges, and al-  
 waies turne them, sprinkling them now and then gently with  
 faire water, and take heed the Cocke come not at them, for  
 he will breake them as well as the Peacocks: for the Cocke  
 of this kinde, is a froward and mischievous Bird. The  
 Chickins being hatched under a Penne, or under the owne  
 Damme, may be kept with either, and will prosper exceeding  
 well, onely you must kepe them in some walled or paled graine  
 Count, Orchard or Garden, for they are great strayers and  
 very much subject to be lost, and the Dam too carelesse, that if  
 she have one to follow her she neglecteth all the rest. The best  
 food to nourish them withall is rawe Curds cleane prest,

oꝝ graine cheefe cut in small bits, let their drinke be new Milke in one Trough, and Milke and water in another mixed; you must fede them many times in the day, and distribute the food with your owne hands, seeing every one have their due, for the Turkie henne will not like the houghenne, call and clocke her Chickens together to fede them; after they are come to strength and maturity, you may then enlarge their walke: for they will eate any thing, & delight in Grasse, Weeds, Gravel, & Sand. And because they cannot alway with cold, nor wet, you must keepe them in Winter, in the warmest & driest places you have. They Dearches whereon they use to sit, must not be high, but an eight oꝝ ten foot from the ground, neither be they able to fite any great height, and therefore must be holpen with Ladders, oꝝ Steppes. The greatest disease that they are subject unto, is the Pippe, and the Squecke, which must be holpen in like sort as the Pennes, and the Egges kept after the same manner. In some places they use to make Capons of them when they be young, which are serued as a daintie dish to the Table.

Now for the generall feeding and fattening of the elder Turkies, especially against Christmas, you shall first give them all the helpe that the Stubble field can yelde, oꝝ the Barne dories; then finding them well stricken in flesh, house them, and for the first fortnight fede them with Raw malte oꝝ sodden Dates and after Cramme them with Watley meale, and milke made into pasc as you cramme Capons, and it is incredible to what fatnesse they will come. And this I thinke sufficient for the Turkie, I will speake of the Pigeon which: whosoever hee bee, that gives himselfe to the trade of Husbandrie, it becometh him specially to have a care for breeding of Pigeons, as well for the the great commoditie they yeld to the Houshold, as for the profit and pærcely reueneue that they yeld (if there be good stoꝝe of Coyne fields) in the Market. Varro writeth, that in his time a payre of Pigeons were sold for 1000. H. S. And that Lucius Axius, a Knight of Rome, before the civill warres betwixt Cæsar and Pompey, sold his Pigeons at tenne pound the payre: so much was that time giben to

Pigeons.

Wantonnesse, and gluttony; yea, at this day in our time, hath bin  
 sene given for a payre of Pigeons tenne pound Flemish. And  
 therefore the Dove-houses are commonly built with great cost,  
 and beautil, in the toppes of turrets and houses, from whence  
 by narrow grated windowes they sit abroad to their feeding.  
 Pigeons (if the countrey be for them) are fed and maintained  
 with little cost, feeding themselves all the yere long with such  
 meate as they finde abroad, except at such time as the ground  
 is covered with Snow, when as you must of necessity help them  
 with a little meate. There is two sorts of them, one wilde kind,  
 that is brought up in Dove-houses, and of colour, either blewish  
 white, speckled, or dume: howbeit, the white is not good to  
 be kept, because they be soonest destroyed with vermine. In  
 Italy there are of this sort, as bigge againe as ours, and are  
 now common in Flanders. Another sort is more familiar and  
 tame, and some thing more large of body, with rough feete, and  
 commonly of colour white, & sometime speckled and yellowish:  
 this kinde is commonly kept in Cities and Townes, where  
 the others cannot be kept, and is fed with meate at home, and  
 because they are ever in danger of vermine, and ravening birds,  
 they are still kept within dozes, and alwayes fed at home. This  
 kinde the common people call tame Pigeons, or moneth  
 Pigeons, because they bꝛæde every moneth. Both these  
 sorts are wonderous fruitfull, bꝛæding commonly eight times  
 a yere (if the kinde bee good) yea sometimes tenne, and  
 eleven times: for in Egypt (as Aristotle telleth) they bꝛæde  
 all the Winter long. And though Hennes are more fruitfull in  
 laying of Egges, yet Pigeons are more profitable by often  
 bringing forth young: and therefore you must provide you such  
 bꝛæders, whose bodies be great and faire, not too old, nor too  
 young, of a good and perfect colour, and a fruitfull kinde. It be-  
 cometh him that will begin a Dove-house, not to begin with the  
 young and little ones, but with the bꝛæders, and to buy so ma-  
 ny Cokes, as he doth Hennes, and to keepe them if he can,  
 matched together of one nest: so if they be so matched, they  
 will bꝛæde a great deale better. They bring forth commonly a  
 Cocke and a Henne together (as Aristotle writeth) and our ex-  
 perience sheweth it. In March they begin to bꝛæde, if the wea-  
 ther

ther be warme, before. There is no Bird scantfuller then the Pigeon, and in fortie daies she conceibeth, layeth, and sitteth, & brings up, and that for the most part all the yere. She layeth two Egges, and when she hath layd the first, which is a Cocke, the next she layeth, which is a Henne, the third never lightly commeth to good. Both the kindes doe alwayes sit, the Cocke in the day, the Henne in the night, they hatch in twentie daies, they lay after five treadinges. In Summer they sometimes bring forth in two moneths thre paire: for upon the nineteenth day they hatch, & presently conceive againe. And therefore you shall often finde among the yong Pigeons, Eggs some ready to hatch, and some flying: if there be no Cockes, the Hennes will tread one another, but the Egges never come to good, but are winde Egges: Aristotle and Theodorus calleth them water Egges, whereof there never commeth any thing; and because the young ones will breede at five moneths olde, we suffer the first flight to sit, to increase the breede: as being hatched in March, will breede againe in July, or August. Those that we meane to take for the Kitchin, or the Parket, are best to be dwaine at the latter time of the yere, when they are worst able to defend themselves from the cold, and from Buzzards, and Croives: the best for brood among all Fowles, is the March breede. They that mean to fat Pigeons to sel them the dearer, do sever them when they be newly feathered, & feede them with chawed white bread twice a day in Winter, and thise in Summer: and such as be now hard penn, they leave in the Nest, plucking the feathers of their wings, and breaking their legs, that they remove not from their places, giving the dammes good plenty of meate, that they may better feede themselves, and their young. Some (as Gellius writeth) doe softly tye their legs, for if they should breake them they thinke the paine would keepe them from fatting; but this spring doth little good, for while they struggle to get themselves loose, the labour will keepe them from being fat: but their legs being broken, the paine will not remaine above two daies, or thise at the uttermost, and will keepe them that they shal never stray from their places. Some use only to pinne them, but so fall they many times out, and become a prey to Vermin: and therefore it is good to bring them to the Kitchin, before

before they be full ripe. The unfruitfull and naughtie coloured,  
 & the otherwise faultie, ought chiefly to be satted, and must be  
 crammed in such sort, as you cramme Capons. Dove-houses or  
 places for Pigeons, to builde in, are made after others man-  
 ners: for the same Pigeons, and such as are fed at home, they  
 make in the highest parts of their Houses lying toward the  
 South, certaine hollow Rumes, and Celles for them, and if  
 the place doe not so serue, dybing in certaine Winnes into the  
 wall, they lay upon them frames of boards, with partitions in  
 them, or earthen pots to breed in, letting certaine Ledges runne  
 from hole to hole, that they may the better come to their perches,  
 and walke up and downe in the Sunne. But the houses for the  
 other wilder kinde, because they containe great numbers, are  
 built after a more handsomer order, although under the Eaves  
 of houses, and in steeples of Churches, you shall have thousands  
 breeding. Varro appoints the Dove-house to be built in this sort:  
 a Towrie adioyning to the house, and well lofted and scaled  
 aboue, with one little doze in it, and foure windowes, answer-  
 ing the foure quarters of the Heauen, which windowes must  
 be well grated, so as they may give light enough, and keepe out  
 vermine. All the walles within must be faire white limed, for  
 with this colour is the Pigeon wonderfully delighted: besides  
 it must be well pargetted and plaistred without, specially a-  
 bout the windowes, so as neither Spouse, Wasell, nor other  
 Vermine may enter: the windowes must be so placed, as they  
 may let in the Sunne all the Winter, having a hole of sufficient  
 widenesse ober against them, well netted and tunnelled, in such  
 sort as the Pigeons may easily flie out and in at, and yet not  
 suffer any hatefull Bird to enter: so the Pigeon taketh great  
 delight in flying now and then abroad, where after she hath  
 recreated her selfe, she commeth with ioy to her nest againe:  
 as on the other side she moumeth, if she be restrained of her li-  
 bertie. Round about the wals within you must have little round  
 holes, from the top to the bottome, wherein they breed. Varro  
 would have them three handfulls in length, and ledges from hole  
 to hole for them to walke upon. Some thinke it best to make  
 your holes of Lome, or Lime and not of Bricke and Stone, as  
 many do, because of the warmth. Thers be some that builde  
 their



their Dove-houses upon pillars in the midst of some Pond, or great water, both because they delight in water, and because they will have them safe from vermine. The meat that they most delight in, is Tares, wilde fetch, Pease, Wheat, Millet: where these be not, you may give them Soper, specially in Winter, Rape seed, and Cockle: for by gathering & pecking up these little seeds, they get themselves a heat in cold weather. When you give them meat, you must throw it hard by the walls: for that part is commonly cleanness from dung. And though Varro bids you to sweepe and make cleane your Dove-houses continually, & that the dung is good and profitable for the field, yet seeing this kinde of fowle both delight in places sprinkled with their owne dung, you shall not neede to be carefull in cleansing of it.

There is nothing better for the preservation of Pigeons then is the Saltrat; which is a great round Ball, or Stone of Salte bought either at the Whitches, or from the Saltpeterman, but the best of those is that which is drawn from the Saltpeter, & thereof at no time let the Dovehouse be unfurnished of one of these.

The Saltrat

If your Dove-house be either new begun, or weakened by mischance, or unprofitable for want of Companie, you shall take the fattest Dogge you can get, and when he is slayed and Bowelled, stop his Bobie as full as it can hold with Comminseds, & so roast it dry, basting it with sweet Wine & Honey mirt together, and then place it in the Dove-house: this will not only preserve those that are in the Coat, but will intice as many as shall feede in the fields with them to follow them & come home also.

The Dogge Roasted.

Take well that they be not fraid, or disquieted with Cunnies, or noise of people, or other like, specially when they sit: if you have occasion to goe into the house, see that you doe it about noone time, when they be abroad a feeding, and be sure to knocke well before you come in. Some say, that it will cause them to love the house, and allure others to come thither, if you sprinkle them with Commin before they goe to feeding, or perfume the house with Sage, and Frankensence. Some have another experience for this purpose, and that is Dotherds beaten small and leaved, mingled with the hearbe Coast, and good old Wine, & given unto them. Others take Barly blowze, sodden with drye Figs, and a part of Honey. Cardan teacheth this, as the best

for

for this purpose, of Barly a: Millet, of Cummin, of Coats, of Agnus Castus, of Worme, of old Louse, or mortar, of good Huskabel, boile them all together, and make a stone of them to be set in the middell of a house. Tragus teacheth to take the rootes of the Chirell, and to boile them with the pickle of Herrings.

There is a kinde of Dove, that naturally is terrible to other Hawkes, and preleueth the Pigeon: the common people call it Castrell. Columella affirmeth, that if you take the yong Castrels, and preserve them every one in earthen vessels wel covered and plastered all over, and hang them in the corners of the Dove-house, it makes the Pigeons have such a love to the house, as they will never forsake it. They have many other adversaries, Crows, Hawks, and Owles, which all destroy the Pigeons, specially when they breed. I found of late in mine own Dove-house, an Owle sitting solemnly in the Nest upon her Eggs in the middell of all the Pigeons, and hard by the house on an old hollow tree, I found peeces of yong Pigeons, that the Owles had brought to feede their yong with: and though the Owle seeme to be greater then the Pigeon, by reason of the thickenesse of her feathers, yet will they creep in at as little a place as the Pigeon will: so small and little is their bodies, though they be bombased with feathers. Against Wasels, Stotes, and such like, Palladius would have you hedge the Dove-house about with sharp prickly branches void of leaves, as Cox, Byers, & such like, as they dare not passe through for pricking. Dydimus and others, do bid you hang great branches of Rue all about the house, specially at the entrance of the dove, or to put wilde Rue under their wings, or to sprinkle them with Rue: for this herbe (as they say) hath a speciall force against such hurtfull vermine. Some say, that if a Wolfes head be hanged in the Dove-house, it will drive away all hurtfull vermine.

But I will now leave the Pigeons, and speake something of the Pheasant, and of their excellence. Palladius teacheth, that you must provide such as be yong & lustie, that were of the last yeeres bringing forth: for the old ones be never fruitfull. One Cocke is sufficient for two Hens: they breed once a yeare, & lay to the number of twenty Egges, beginning in Aprill, and some where in March, but they are better to be brought up under a

Venne:

**Henne**: so as you set under one Haine fiftaine Egges, observing the time of the spawne, and the number of the daies, as I told you before of the Hennes. The thirtieth day they come forth: so; the first fiftaine dayes you must feed them with Barley-floure threberly (so, and cooled, upon which you must sprinkle a little Wine. After you shall give them Wheate, Crasthoppers and Antes Egges: let them not come nere the Water for catching the Wippe, which if they chance to have, you shall rub their bellies with Garlicke, stamped together with Tarre. They are fatted in thirty dayes, with Wheate-floure, or Barley-floure made in Pellets, the Pellets must be sprinkled a little with oyle, and so put into their throats: you must take heede you put it not under their tongues, for if you doe, you kill them: neither must you give them any meate till you perceiue the first be digested.

And as thus you order the Pheasant, so you may also order the Partridge, so; these are creatures of so nere allyance & delight to one with another, that you may keep both in one roome, having in the corners thereof little close boxes, whereinto they may runne and hide themselves, for they desire to lie close & untrobbled, in the midst of this Roome you shall place sundry wheate-heaves, some with the eares upward, and some with the eares downward, & nere unto them shallow tubs with swete water: & if unto this Roome doe adioyne any safe grasse plot where they may walke at their pleasure, they will prosper much the better, & fadge a great deale the sooner. Now next unto these I place the Turtle-dove, of which Columella affirmeth, that Turtles Turtle. will never lay, nor bryng forth in the house, nor Partridges: and therefore they used to take them wilde when they were full ripe, and to fadge and fat them in little darke rooms like Pigeons holes: the old ones be not so good, as neither the Pigeon is. In Winter you shall hardly have them fat, in Sommer they will fat of themselves, so they may have plenty of Wheate and Corne: the water must be very cleare and fresh that you give them. They hold opinion, that the Turtle after he hath lost his mate, contineth ever after solitary. There are great flocks of them in England, & especially in Hertfordshire; if they be payred and that the male & female may live together, they will incur any Imprisonment

**I**mprisonment, and are as fit to be kept in Cages, as any birdes whatsoeuer, and if your Cages be large enough as commonly Garden Cages are, you may keepe twentie payre in one Cage.

But because there is greater store of Thrushes & Blackbirds, we care the lesse for keeping of Turtles. Though Thrushes and Blackbirds be kept in diuers places: yet as Plinie saith, there is in no place greater companie, then is taken in the Winter time in Germany. What they were used for; great dainties, appeares by Horace:

No daintier dish then is the thrush.

They are commonly dyessed whole, and not dyadone, so; their inward partes may well bee eaten, so they be new: their Croops are commonly full of Juniper Berries. Varro writeth, that Thrushes were in his time at twelue pence a piere. Where they use to keepe them, they also put as many as they take wilde among the others that they brought up before, by whose company and fellowship they passe away the sorow of their prisonment, and fall to their feeding: so; you must alwayes haue old felloines for the purpose, by whose example they may learne both to eat and drinke. They must haue warme houses, as your Pigeons haue, crossed through with small Perches: so; after they haue flowne about, or haue fed, they desire to rest. The Perches must be no higher then a mans height; so as you may easily reach them standing upon your seate. The meate must be cast in such places of the house, as lie not under the Perches, for siling of it. Columella and Palladius write, that unripe Figges beaten and mingled with Wheate, flowre must be given them, that they may eat thereof their fill.

But in England, & other Countries, they place in their Cages diuers Troughes of which some they fill with Bepps, Hawes and other Winter Berries, some with Hempseed, some with Linseed, some with Rapeseed, some with flesh chopt small, and some with water. Aristotle maketh many kindes of them, among which he also putteth the Colmons, that feede upō Grapes. Our Thrushes do feede so; the most part upon Juniper berries, which their Croopes being opened (as I said) doe shew. They use

use also in many places to keepe Quails, which is rather a Quail  
Bird of the Earth then of the Ayre (as Plinie saith) but because  
they feed upon Elebor, & venemous seeds, and beside are vexed  
with the falling sicknesse, many doe marueile (as Athenarus  
writeth) why they be so greatly esteemed. They say their  
young must be fed with Antes, and Emmets Egges, as the  
Partridge. It is thought, that he flieth over into other Coun-  
tries in the Winter time, as the Crane, and the Stocke doth,  
following for the guide their oldest Quail, called the mother  
Quail.

But howsoever this be the opinion of the Ancients, yet we  
finde by daily experience, especially in these Countries where no The Swan  
such poisonous & unwholsome feedes grow, that the Quail is  
a most excellent & daintie Bird, both in the dish at great feasts  
and in the field for sport, and pleasure, either with the setting-  
dogge, or her sight before the Hunts, or in the taking them  
with the pipe or call, to which they are wondrous apt to be in-  
ticed. This Bird if you meane to feede it to any extraordi-  
nary fatnesse, you shall put them into little low, flat, yet large  
Cages, having the one side open like a grate, and before it little  
troughes, into one of which you shall put fine Chilter wheate  
and into the other cleare water, and geve them a little at once  
but be eber and anone feeding them; and to the ende they may  
be the better obserued, you shall place their Cages in such a  
place as you or some others may have occasion continually to  
passe by them, and thus in a fortnight or three weekes they will  
be wondrous fat.

But before I passe further in this discourse, I must not forget  
to speak something of the Swanne which is a principal Fowle  
of esteeme and is brought up in the Low Countries, & kept in  
great numbers in Lincolnshire, a Countrey replenished with  
Gentlemen of good houses, & good house-keepers. And Athenarus  
allegding the authoritie of Aristotle, accounteth this Fowle  
to be very scitfull, and of great stomache, so much, as it is  
thought they dare geve battail to the Eagle. They are bred  
and kept in Lakes, Rivers, & Fish ponds, without any charge  
at all, and do great good in the Rivers by plucking up the  
weeds,

wards, and other annoyances: for the excellency of his downe, and daintinesse of his flesh, he is greatly esteemed: There is one excellent kinde of them, that taketh his name of the good watch that he keepeth, and is alwayes cherished and kept in the Ditch of Cities, and forrestes, for his great faithfullnesse in giuing warning. They be kept almost in like manner as Geese are, but that they use to sit longer, sitting a whole moneth or thers about: they bring forth seldome above eight, and so many did my Swannes bring me, and sometime five. They make their Bells hard by the water, of Sedges, Weeds, and like Ruffe: their young ones they carry straight into the rivers. If the Lakes and Streames be frozen in Winter, you must house them. This Bird is counted among such as live longest, sove sheewing her owne death, as Plato and Martiall witnesse, with a sweet and lamentable song.

Now for the feeding and fatting of the Swanne, which is a noble and prime dish at any great feast, you are to understand that they be the Cignets which are to be fed, and not the olde Swan, howsoever some are of opinion that the olde one is a dish above all others, but setting that excellence apart, when you take up your young Swans, you shall put them into a close ponde out of which they cannot get, having onely some little dry grasse, plot to sit in and to pumme themselves, neare to the verdge of this ponde you shall place three Tubbs, in the one you shall put good old drey Dates, in another some Paline of Wheate and Barley mixt together, and swimming in water, and in the third some old dried Palte: on these let the Swannes feed at pleasure, and once or twice a weeke cast upon the water, some hot smelte Chaynes which will both scower and feede, and three weekes or a moneth in this manner is a sufficient time to fat my Swanne thoroughly and cleanly, where as to feede them in houses and dry places as many doe, the Bird being a much defiled creature, with her one Dure, and being naturally (without the helpe of Water) very uncleanny, they can neither feede nor prosper, and aske double attendance to small purpose.

Feeding of  
Mearnes &  
others.

Now having spoken thus of the Swanne and her feeding, I will speake a word or two of the feeding of other fowle, which  
although

although they live not naturally, and continually in the water, yet they live not from the water, and of these I account the Hearne one of the chiefest, because they are nourished for two principall causes, as so: the flight and service in the disher. Now to speake of their nourishment ( for of their herte I am not to meddle, because they are fowles of that liberty, and plenty, and so unpropert for any tame accommodation, that it is losse of labour to deale with them ) you shall understand that if you will goe to the least charge, you shall take them o: Buy them from their Nests in their first pen-seathers, and then put them into a close house, which the larger it is, the better it is, and the more Barnelike to the better purpose; for they must have many Crosse Bankes, Beames and other artificiall places to perch upon; At the bottoome of the house, you must have sundry Boordes of a large compass with Nings and Tenters, whereto to binde the meate wherewith you feede them, and amongst those Boordes as many shallow Tubbs of water, whereto to drinke and bath at pleasure, and about those tubbs ( a little remote ) good store of Sand and small Gravel. To the other dy Boordes, you shall tye the flesh on which they feede, which would be the livers and fleshy intrails of all sorts of Butchers Cattel, also all manner of Dog-flesh o: any garbage that is sweet what soever, as Hearts, Kidneys, Gylleones, Livers and the like. And this must be don twice a day at the least, but if thize it is much the better. This feeding house must be so opened at the top that what raine falleth may light therein, for without much moisture they cannot prosper; beside you must have great care to the cleane and neate keeping of the house, for although the fowle be of themselves stutty enough, yet they delight in cleanliness when they are in imprisonment. Now there is from these creatures a double employment, the one for the entering of the Gersalcon, falc o: other Haulkes by the way of Traines o: made flight; the other for the watching at solenne feasts and entertainments. If you will have them for the flight, you must have at the top of the house, at one ende a close Lober o: hole which you may open and shut at your pleasure, out of that hole o: Lober you shall force one of the Hearnes, and by seating her, force her into the open fields where you shall marke her, for where she first lights



lights, he will hardly stray farre from that place, especially if there be any kennell, plashes, or other furrowe filled with water. When at the Evening or any other time you may make your light at your pleasure. Thus as you bring up, soe & make fat these Hearnes, in the like manner you may bring up & fat both Ducks, Gulls, Dreawes or Watters, yet h Butter is best to be fed by h hand, because when they have fed, you may tye up their beaks, being a fowle that naturally will cast up his gorge after he hath fed, if he be not prevented.

Feeding of  
the Curlew  
and other  
Fowle.

There are another Rank of fowles which are much more dainty & of greater price then any h hath bin formerly named & that is, h Curlew, h Onat or Rat, the Goodwige & h Gray-Plover; & these you may take frō their nests when they are yong, or else at moulting time, & bring thē up & fāde them as fat or fatter then any other fowle, either by cramming them, as you do cramme Chickens with small crammes made of wheat meale & milke, or otherwise with fine chilterwheat: & being fed plentifully thereof three times a day, h is, Morning, & Aftone & Night, & be sure to let thē have great floze of water: & observing this order you shall be sure to have thē fat in a fortnights space at h utmost; Thus I have spoken (as I suppose) sufficiently of all manner of Land & water fowle which are behovefull for the husbandman either for his family or otherwise for his extraordinary entertainmēt.

Of Fish-  
ponds.

Now it falleth out in good order, that from talking of Winter fowles we should come to entreat of Fishponds, and fish. The best making of Ponds, is either by the Sea: or else to have them from some great streame or river, that may bring in both water fish, which by flood or fluse may let in alwayes fresh water, not suffering the old to corrupt, but alway refreshing it, and bringing more fish. The next in goodnesse, are those that are fed with pipes or secret passages under the ground, and may be let out againe by sluises. And therefore the water (as I said) must be well inclosed with good Bayes, Bankes, and Walles, that they may be able to abide the rage of the floods, and the water. The worst and last kinde, is such as are made in Lakes, standing Poles, or raine waters. These kinde of Ponds though they be the worst, by reason of their uncleane stinking and corrupt water, yet where there is no better, are to be made account of: for though they be not the wholesomest for keeping

keeping of fish, yet they sell some commoditie, and are most necessary about the house, either for watering of Cattell, keeping of Cuse and Duckes, and washing, and other like uses; but if so be you can make them either by the Sea, or neere some great River, so as the water may be let in and out at your pleasure. And whensoever you open the Sluices, to let out the water, be sure that you have them well grated, that the fish can by no meanes passe through, and let the passage, if the place will suffer it, be made on every side of the Pond: for the old water shall best boile, whensoever the streame bends, if the current lye against it. These Sluices or Passages, you must make at the bottome of the Ponds, if the place will so serue, that laying your leuell with the bottome of the Pond, you may discern the Sea, or River, to lye seauen fote higher: for this Columella thinke, will be a sufficient leuell for your Pond, and water enough for your fish. Howbeit, there is no doubt, the deeper the water comes from the Sea, the cooler it is, where in the fishes most delight. And if so be the place where you meane to make your Pond lye leuell with the brim of the Sea, or the River, you must digge it nine fote deepe, and lay your Current within two fote of the toppe, and so order it as the water come in abundantly: for the old water lying under the leuell of the Sea, will not out againe, except a greater rage come in: but for the Pond that is subiect to the flood and ebbe, it is enough if it be but two fote deepe. In the banks and sides of these Ponds, you must have Bushes and Creeke-holes for the fish to hide them in from the heat of the Sunne: besides, old hollow trees, and cotes of trees, are pleasant and delightful harbours for fish. And if you can handsomely conuey them, it is best to bring from the Sea, little Rocks, with the Weeds and all upon them, and to place them in the midst of your Ponds, and to make a young Sea of them, that the fish may scarcely know of their imprisonment. About Furoan in France, and in other places, you shall finde in Loughes and Raine-water, even in the Wilderness and Desertes, great abundance of fish. In diuers places of the low Countries, where they have their Ponds fed with the River, which they may shut out at their pleasure, they so order them,

as they be eyther enuironned, or diuided with deeper ditches, wherein the fish doth lye in the summer time: and the rest of the ground betwixt the ditches (the water being voided and kept out by sluises and Bankes) is sowed with Summer Corne, and after Harvest, the water let in againe, whereby the ground being wondrously enriched, doth yeild great Croppes of Barly and Summer Corne; and (as the Poet saith) for the land, so may be said for the water, Not every ground for every seed, but regard must be had, what for every one is meet. The Romans keepe in their Ponds Lampreies, Wyters, Luces, Bulllets, Lampreys, Gulltheades, & all other fish besides, that are used to be kept in fresh waters. Ponds for Wyters, were first deuised by Sergius Orata, at the Baynes, about the time of L. Crassus the Dictator, before the Battaille of Maris, not so much for delicacie, as for the commodity and gaine. Cockles and Bulllets, were kept in Ponds by Fuluius Hirpenus. Moreover, diuers fishes delight in diuers places. The best Wikes & Luces were thought to be in the Riner of Tyber, betwixt the two bridges: the Turbots at Rascenna: the Lampreies in Syccill: so Rivers, Lakes, Moles, and Seas, in some places haue better fish then in others. But to returne to my fish-ponds from whence I came, neyther may all sorts of fishes be kept in euery one, for some sorts are grauellers, delighting onely in Granelly, stony, & sandy waters, as Peanowes, Gudgeons, Bulheads, Kusses, Trouts, Perches, Lampreys, Crebilles, Barbils, and Chevins. Others delight againe in muddy places, seeking euer to lye hid in the Mud, as the Wench, the Sele, the Bream, the Carpe, and such others. Some againe delight in both, as the Pike, the Luce, the Carpe, the Bream, the Bleake, and the Moach. The Granelly fishes, specially the Peanowes, are ingendred of shaypes dung, laid in small Baskets in the bottome of a Granelly Riner.

The Luce, or Wikes, growe (as likewise both the Carpe) to be great in a short time, as in three or foure yeeres, & therefore in such Ponds as haue neyther the Sea, nor Riner comming to the we use euery fourth or third yeere, to drawe the old, and to stowe them with young. And in these parts we chiefly stowe them with Carpe, hauing small Ponds and steeles for the purpose

to helpe them in, so as you may come by them at your pleasure.

I will not enter here into any large Encomiums, touching the praise of this art of Angling. It shall suffice me that all men know it, that few good men but love it, and a world of poore men live by it; neither will I stand upon the use and vertue thereof, because it is eyther for profit or recreation; nor upon the Antiquitie, because no man living knowe the beginning; nor upon any thing that is linked unto it by the Curious. I will onely rest my selfe upon the Art it selfe and fully as the shortnesse of the time and the shewnesse of my speeche will give me leave, deliver unto you what I know therein.

The Art of Angling or the art of deceiving fish, consisteth in these few principles. First the man, the Instruments, the Bayts, and the seasons good or ill for the purpose.

Touching the man, howsoever some would fire upon him twelve vertues, some twenty, & some more, some lesse, yet I must contract them and say, if he be Tullies honest man, he is then the Anglers sufficient man: there is required in him much patience and constancy, the one will take from him Anguish, the other error; he must love the sport earnestly, for No Love, no Lucke; he must have humble Thoughts and humble Gestures; for he must not disdain to kneele, to lye grobeling, to stand barehead, nay to doe any humble action to attaine his purpose: he must be of a strong constitution, for he is like to undergoe the worst ferors of Tempests. Lastly for his apparcell it must be warme and wholesome, not garish or glistening, the one is wholesome for his Body, the other is much offensive to his sport. For as the Fish is of a most pure sight, so they are of a most nice conceit, and where they once take offence, no flatterie can reconcile them: therefore his apparcell must be sad and deepe coloured like the water, plaine and close to his Boote, and indide so like a shadow that it will give no shadow.

For his instruments they are Anglercons, Lines, Cocks, Hooks and other pocket Instruments that belong to one or all of them.

Angle Rods are of divers kinds as some of one peece, as those which are for the Pike and other great devouring fish, and those are commonly made of good ground Bassell, being of an equall bignesse at both ends. Others of two peeces, the

the body of a fine grooved ground, *Witcher* as an *Olme*, and the top of a small ground, *Wassell* well seasoned, straight and tough, others of *tin*, that is of more pieces, and these commonly are made of *Canes* one a degree lesse then another, and so let in one into another into strong & close well lanceder sockets; & the top of a strong, smooth & pliant *whalebone*; & indeede these *Roos* are the most sufficient for any ordinary Angling whatsoeber, & because there is so great choyce of them to be bought almost in every *Haberdashers* shop, I will not trouble you with any further relation of them; but leave them to your best election.

Of Lines.

Next the Angler odde are *Lines*, some of hayre and some of *Silke*, and both of hayre and *Silke*, and these lines are various as any thing whatsoeber belonging to the Angler. Some (as those which are for the smallest *Fish*) being twisted of three hayres, some of five, some of seaven, some of nine, and the biggest are but of eleven. To the line of three hayres you may adde one *silke*, so that of five you may adde two, & to the greatest number of all, you shall adde but three *Silks* at the uttermost: for the length of your lines, though the ordinarie size be betwixt three and foure *ladome*, yet you must proportion them, according to the depth and breadth of the *River* wherein you Angle, and according to your place of standing when you Angle. The white hayre and the gray hayre are the least discerned in the water, & so the best, the blacke yeild too much shadow and so doe both the *Mullet* and *Talwaile*, yet is the graine exceeding good in some waters, especially where there are many weeds and flowers.

Of Corkes.

Next to the Lines are the *Corkes* or warning-givers when the *Fish* byteth, and these varie little in their shapes, but much in their bignes, the least *Corks* belonging to the least line, & the bigger to those of bigger quantity, the fashion of the *Corks* in generall is like a peece with a quill running through the midst, in which the Line passeth, and is fastned by a wedge made of another quill, it is to be set higher or lower at your pleasure: there be *Corkes* made of other fashions, some sharpe at both ends, some flat, some round like an Apple, but none are better then that which was first of all described.

Of Hooks.

After all these I place the *hookes*, which are the most material instruments of all other; and are of the greatest diversity of shapes,

shapes, for they are almost as generall, as the severall sorts of fishes, yet all of one matter and substance, that is to say, of strong steele temper well hardened. I could here enter into a large description of the manner, forme and fashion of making them, and how both to temper them & to scold them; but because they are so generally to be bought in every shop, I will save that labour, and referre you to the makers and sellers, who for six pence or a shilling will furnish you for many yeeres, and shew you which is for the small fish, which for the great, which for those of middle size.

As thus you may buy these bare hookes, so you may also buy all manner of flies for every month in the yeere, and for every fish that biteth at those baits, especially the Trout, the Chevin, and the Barbell. Now if you will be so industrious to make these things your selfe, then having provided Wylver, Silke, woad feathers, and the like, lay but the examples before you and imitate one, and you shall finde it most easy to make an hundred.

Now lastly, under the name of those which I call pocket Instruments, I comprehend all other necessary adjuncts, as a Box for your flies, a Board for your lines, and plumbes to sound the depth of water, a large Ring to unfasten the hookes in the water when it is intangled, a bag of red cloth for wormes, a home for Haggots and Bayts of that nature, a Case for live flies, a case for Needles, Whimble, Silke and Thread, for ware and loose hayres, a pouch with many purses and curious Skrip therein to carry all your gettings.

The next thing now, which succeedeth in place are Bayts, and the generall uses of them, and of these there are an infinit number, every fish in a manner taking delight to feede on severall meates, I will briefly therefore runne over the names of most of them and onely touch and pitch upon those which are most materiall; the first baits then are wormes of all kinds, the Gentill, the Bob, the Dace, the Scartab, Frogge, Grasshopper, the Spanne of waspes, & Hornets, the young brood of Bees, small Snailles, Moles, Penowes, Millerthumbe & the like; then there are dead bayts, as paste, clotted blood, Beasts livers, Coyne, Chesepeacings, Bramble berry, &c. and every one of these have their severall seasons & severall fishes, as the Worme, the Bob,

Of Flies.

Of Bayts.



and the Woe are good for small Fish & middle sized Fish in May; the bottom Flies in June, the Spogot in July; Snails in August, the Grasshopper in September, and so likewise of all the rest as you may finde out by experiences.

But not to puzell your selfe w<sup>th</sup> your memory with many multiplicities and confusions, you shall then understand, that if you Angle for delight and for the conquest of the cunning Fishes which are not the greatest, then if you Angle in a small Brooke and a gentle streame, then your onely excellent Bayte is the red Worme; but if you Angle in a great broad streame and deepe channell, then there is no Bayte comparable to the Spogot and the Bobworme; If you Angle for greater prey or Fish of higher estimation, together if he in small or great streams, in standing lakes or still waters, there is no Bayte comparable to ranke and strong Eller cheese, or else Eller cheese beaten with fine white bread crums to a gentle paste, for there is not any Fish that swimmeth which will refuse to bite at this if it lye in her walke.

Of good  
and bad seasons  
to angle in.

Now after all these knowledges it is mete that our Angler be well experienced in knowing which seasons be good, which bad for the practise of his Art; for to runne blindfold into a busshesse, or to doe things out of season, is to overthrow that you most affect; or like folly, to cut downe the bough on which you stand. Therefore you shall understand that it is not good to angle in the Summer time (which I account from Appill to October) in the extreame heate of the Sunne, as from nine a clocke in the forenoone till thre in the afternoone, nor by any meanes after five in the evening, for in these houres the Fish are lodg'd and will not bite; all other houres are proper for the recreation, provide you begin not much before Sunrisse, nor continue long after Sunne set; a South winde is profitable, north and East will drive the Fish into their holes. A warme close day is good to angle in, so is warme ayre, wet dewes and gentle showers.

It is good Angling after land floods and overflows of water, the Rivers being drawne againe within their owne Bankes & the water newly purged from uncleannesse. And lastly in all your Summer angling observe ever to chuse the coolest bowyers and the closest seasons.



## entreating of Angling.

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Of winter  
Angling.

Now touching your seasons for the winter Angling, which is accounted from September to March, you are to doe all things Contrary to your Sommer Angling, that is to apply your exercise in the strength and heate of the day, as at highwone, or from nine in the morning, till three in the afternoon, and to let passe both the darke frostie morning and the colde unpleasant evening; for all manner of Fish are of a subtle quality & will hardly bite but where they may discern, and that makes them to forsake when by the too much brightness of the Sunne they discern too much, as in the Sommer, & by the want of the Sunne and day they discern too little as in the Winter; and therefore observe you a meane betwixt these two, and you shall hardly erre. Now you shall heere also understand that as this winter angling at highwone (which I reckon from eleven a clocke to two) is generally good in most places; yet it is most good in ponds and standing waters that are deepe, thicke and dark at the bottome, so that in the best of the day, neyther Sun, Moone, Line nor hooke are transparent. Again, if you angle in Rivers that ebbe and flow, as our Thames, Trent, Swadworth and the like; If it be where the Tide runnes high and strong, then the best season for Angling is in the ebbe or falling of the water; but if it be where the Tide is scant and doth no more but hying the River to a glory, there the best angling is at the Flood, for shallow and transparent waters, like weak Judgements, lay open their intentions and so are prevented; when deepe bounds like deepe Judgements, couceale their purposes and so make their preylaves to their inventions. Lastly, (and there is nothing more Authentick and certaine) when you see any Fish play upon the top of the water, to catch at Flies, and to surche and luche upon the ayre, or when you shall perceive the Pike to hunt and pursue the smaller Frye, and that the Roach, the Dace, the Gudgeon and the Perch are chased from their haunts or little pits of their aboad, then I assure you is a most excellent time for Angling; and when you see any thing contrary to these things before declared, then keepe up your Angle, and bestowe your time in other Recreations.

Of Fishes  
Haunts.

The next thing now that falleth in my way, is to speake something of the haunts of Fishes and where they live and make their abode: for to sake (as the proverbe is) a pottle in a bottle of Hay is a pleasure so unpleasurable, that no man will pursue it: therefore if you be a schollar, new entred into the schoole of angling, and would begin with the smaller sort of Fish, and such as are both most frequent, and soonest deceived, as are the Gudgeon, the Roach, the Dace, the Whitling, the Loach and the Bullhead, then you shall know that their haunts is (for the most part) in shallow streames, which are bright and transparent, where the pebble and sand may be discerned, yet full of little pits and obscurities where they may dibe downe and lye hid from devourers; for Spuddes and ouzle places they care not, and though they doe and will live in ponds and meares, yet it is constraint and necessity, not free will, neyther is their Fish swate or pleasant (as these in the Riber) but hould the talt of the soyle where they live slaves and not free demisons.

If you will angle for Celes, the best angling for that sort is upon the heads of Milles, within the Dammes, close unto weares, or upon dyers Stapes, and such like places, and as nere as you can immediatly after some inundation or overflow of water; or instantly after Thunder or Tempest: for upon these occasions they breake their beds and range abroad, and then they are so eager they will bite at any thing; Now in this action you must have your line very strong, as of seven hayres and one silke, yet therewithall very thort as not above eight fote at the most; it must be plumed with good stape of Lead, so as it may rather sinke into the Spudde, then float any thing above the Spudde; the hooke must be pretty and round, but in any case no Corke at all, for you must understand that you must in no wise strike till palpable you feele the Cele to placke: no, must you doe that action rashly neyther, but with great discretion hould the Line onely kisse and no more, and so suffer the Fish to play herselfe weary, and with patience and sufferance draw the prey unto you. The onely Wayte in which the

the Cele takes delight, is the red worme, and next it li-  
tle pieces of Shapes guts, and for want of these, you ranke  
Caterpillars hath no fellow. Thus in as base words as I  
can I have delivered unto you the whole substance of this  
Acte, I will now proceede and speake something of the  
Nature, use and benefit of Bees.

Because I will not haue our discourse of husbandry depriued  
and maymed of such a profitable member, whose use may in all  
places, be they neuer so desert, or barren, be had, I thinke it good  
as a conclusion to the whole, to shew you the manner of keeping  
and ordering of Bees: for the good husband by cherishing of  
them, picketh out many times a good piece of his living, yea,  
the poore soule of the Countrey that hath no ground to occupie,  
may raise hereof and that without charges, a great commodi-  
tie. Merula reports, that Varro had partly for the Rent of his  
Bees, a thousand gallons of Honey: and that in a house in Spaine,  
hading not passing one Acre of ground to it, hath yearly bene  
made of the Bees, foure score pounds worth of Ware and Honey.

This little poore creature the Bee, doth not onely with her la-  
bour yeld unto us her delicate and most healthy Hony, but also  
with the good example of their painefull diligence and  
travaille, encourageth man to labour and take paines ac-  
cording to his calling: in such sort, as it seemeth the Al-  
mighty and most excellent Creator, hath of all other speci-  
ally created this little poore creature, for the benefit and  
commodity of man: by whom besides the commodity of the  
Honey and Ware that they make; we might take both  
example to spend our life in vertuous and commendable ex-  
ercises, and also to honour and reverence the wonderfull  
bounty and goodnesse of the most gracious Lord thewed  
towards us, in the creation of this small and profitable  
worme.

They are continually busied in labouring, they shew great  
cunning and knowledge in their traualles: they have al-  
waies amongst them the lively Image of a perfect Common-  
wealth, they yeld obedience to their Prince, not liking the  
government of sundry heade, but love to be ruled by one: each  
one of them laboureth and travaileth in his charge, in so much,

Bees.

Industrie  
of Bees.

Bees their  
Commons  
weales.

The Birds  
of the  
Muses,

as the wisest Governours & Councellers in Common weales, have taken the Bees for their Pattern in choosing of Princes, distributing of Offices, rewarding of vertues, and punishing malefactors. Varro did alwaies call them the Birds of the Muses: and Virgill with wonderfull colours, doth eloquently set forth the Bees, their Common weale, Palaces, Buildings, Names, Humours, Warres, and Trauailes, supposing them to be partakers of reason, and that they have some instinct from above, in that they so nere resemble the mindes of men; yea, many times excell them. If the King be taken, the whole Swarme is had: if he be gone, they disperse themselves abroad, for they cannot live without a King; hating as well the headlesse government, as the subjection to many heads. If the King, so (as we teache him) the Paister Be die, the whole Swarme scoteth, and mourneeth, they straight waies cease from gathering of Honey, they sitre not abroad, but onely with a heauy and sorrowfull humming, they swarme and cluster together about his body. The nature surely of this pidge creature is greatly to be wondered at.

Their Princes palace is sumptuously built, in some secret part of their hives, being mounted above the rest, which if you happen to buse, you destroy the hve. They live all as it were in a Campe, and duely keepe their watch and ward, working together, and oftentimes sending abroad their Colonies, they are warned at their Captaines appointment, as it were with the sound of a Trumpet, by which they know both their times of warres, and truce: they ward all the day time at their gates in warlike manner, and have great silence in the night, till one of them in the morning humming out the discharge of the watch, they get them abroad to their business: when the sleepe time of the night comes in, they make lesse and lesse noise, till one of them goeth about with the like sound that he gave in the morning, setting as it were the watch, and giving them warning to goe to rest: at which time they all suddenly hold their peace. In the morning (as I said) at the discharge of the watch, they roame straight to the gates, but flye not abroad, except they see the weather will be faire: whereof by nature they have perfect understanding.

Being

Being laden, they flie with the winds: if any tempest suddenly arise, they counterpoise themselves with little stones, flying in the winds as neare the ground as may be: their labour, both at home, & abroad, is certainly appointed. They labour at the first within the compass of thre or foure paces about the Hives: when the flowers there have bene sufficiently wrought, they send abroad their discoverers to finde out more loode. And when they fall all together to their businesse, some worke the flowers with their feete, others carry water with their mouthes, and dropes in their little fleshes: the young lustie fellows labour abroad, the elder at home. Those that goe abroad, do with their snoutings lane all their Whigges, which nature also the horses hath made rough: thus being loaded, Legs, Head, Backe, and all, groyneth as they may beare, they returne home, where there waiteth commonly thre or foure at the doore to unload them. Within, all this while are some laying in order, some building, some making cleane, and some making ready their meat: for they feede severally, for feare of beguiling one the other. They frame their houses archwise within the Hives, with two passages, so that they may enter one way, and goe out another. Their common that they make are wrought full of holes, which holes (as Varro saith) are their Celles or lodgings, made every one fife square, according to the number of their feet: these Celles they doe fill with Honey, filling every one in a day or two. These canmes are fastned to the upper part of the Hive, a hony little upon the sides, not cleaving to the Hive, being now cornered, now round, according to the fashion of the Hive: as both Plinie reporteth, & I shall hereafter shew you, when I speake of the framing of the combs. The Combs are kept up from falling, with small pillars and propes below, so built as they may goe round about to repaire them. The thre first sorts of their Celles beneath, are left empty for feare of the Hive: the uppermost are as full as may be, such as are loyterers and idle vagabonds amongst them, are noted, and punished with death.

The punishment of loiterers.

Aristotle maketh many sorts and kinds of them, to petrofol he counteth the short speckled, & well knit to be the best: and next to them, the long ones like Talaspe: the thick, the kinde that you call the Whorse, with a very large hole: the fourth, the Drone,

The kind of Bees.  
The chiefe.

The  
Drone,

Drone, being bigger then all the rest, wanting both his sting  
and courage to labour: and therefore they use to make at the  
entrie of their Hives small Gates, wherein the Bees may  
enter, but not the Drone. And the same Aristotle, in the chapt.  
before, saith, that there are two kinde of Kings or Mailer  
Bees, the one of a golden colour, which is counted the best:  
the other blacke, and partie coloured: they be twice as bigge as  
the other Bees, the tayles of them as long as one and a halfe  
of the other, they are called of some, the Mother of Bees, as  
the chiefe breeders, because the young of the Drones are bredde  
without a King, but the other Bees never, Virgill following  
herein Aristotle, both most commend the little, long, smooth, and  
faire Bee, and making mention of two sorts of Kings, he de-  
scribes the worst, whereby he shall doe no harme.

Breeders:

The best  
sorts of  
Bees.

The shape  
of their  
king.

Destroy (saith he) and let the other live,  
Whose golden hew doth glister in the eye:  
And deckt with glistering scales, faire shew doth give,  
Of faire more gentle, and farre more Majestic  
And with this hee lookes the other doth appeare,  
(And dragging drawes his tayle with heavic cheare,

And as there is two sorts of Kings, so is there of the other Bees.  
Some uglye scurie, and some againe doe shine,  
Bedeckt with drop of golden colour fine,

Being milde and gentle: so; the Bee, the greater he is, the  
worse he is, and if he be angry, and fette, and round, he  
is worst of all. And because (as I said before) the best are  
only to be medled with, Altho the good and the bad are alike  
changeable, and requite like tendance, and speciall hede to  
be had that you mixle not the bad with the good: so; lest will  
the encrease of your Honey bee: If some of your Swarme be ill  
matched. You may save your selfe with Bees thre manner  
of waies, either by buying them, taking the wilde Swarmes,  
or making them by Arte. Such as you buy, let them be of  
the kinde and shape that I told you of, and be sure before  
you buy them, that the Swarmes be whole and great,  
which

What to  
be consid-  
ered in  
buying of  
Bees.

which you may iudge by looking into the *Hive*, or if you cannot be suffered so to doe, you may guesse it by other tokens: as if so be you see great numbers clustering at the doore of the *Hive*, and if you heare a great buzzing and humming within: or (if they be all at rest) putting your lippes to the mouth of the *Hive*, and blowing therein, you shall easily perceiue by their answering sound, whether their number be great or no. In buying them, beside, you must looke whether they be sound, or sicke: the signes of their diseases is, if their *Swarmes* be great, themselves faire, and well coloured and worke lustily. Againe a token of their not being well: as if they be haggie, looke loathsomely, and daskily, except at such time as they labour: for then they woe leane and rough, with extreame travell. You must make your coniecture likewise by their age, such as are not aboue a yere olde, looke faire and smooth, and shine, as if they were *Dyled*: the old ones are both in sight and feeling, rough and rugged, and by reason of age, wrinkled: which nevertheless, for cunning in making their Combs, experience, industrie, and skill, fulnesse in the weather, doe farre passe the others. In any wise see that you buy them rather from your next neighbour, then from a strange Countrey, or farre off, for they many times perish by Change of ayre, or shaking in the carriage. And if you be divided to carry them farre, take heede you neyther iogge, nor trouble them: the best way to carry them is upon a mans shoulders, and that in the night time, suffering them to rest in the day, and pouring in to them such sweet things as they delight in, keeping them close. It is better removing them in the Spring, then in Winter: for they doe not so well agree with Winter. If you carry them from a good place, to a bartaine, they will straight wayes bid you farewell, and forsake their *Hives*. When you have brought them to the place where you mean they shall stand, if it be day time, you must neyther open them, nor place them till it be night, to the end they may after the quiet rest of the night, goe cheerefully to their worke the next morning. Be sure to marke them well besides for two or three dayes after, whether they goe all out or no: for if they doe, it is a shrowd signe they will away. Sometime, if the place be

Transporting of Bees.

The taking of Bees.

good



good, you shall assay to stroe your selfe with wilde Bees: for although the Bees (as Plinie saith) cannot be rightly tamed eyther wilde, or tame, yet Varro calleth them wilde that bzaee in wilde places, and tame, such as we keepe at home: and affirmeth the manner of keeping them to be diuers. There is great stroe of the wilde sort in Sarmatia.

To finde  
out the Bees.

The greatest token of Bees and Honey nere, is where they be in great numbers about the waters: for if you see the number but small, it is a signe it is no good place for Bees, and if so be you see they come in great numbers, you may some learne where the Stockes be: in this sort, as Columella and others haue taught: You shall carry with you in a Saucer, or such like thing, some redde colour, or painting, and standing nere to springs, or waters thereabouts, as fast as they come, touch them upon the backs while they are drinking, with some little straw dipped in the colour: and tarry you there till such time as you see them returne. If the Bees that you marked doe quickly returne, it is a token their houses be not farre off; if it be long ere they come, it shewes they dwell farther off: wherefore you may iudge by the time. If they be nere, you shall easily finde them, if they be farre off, you shall come to finde them in this sort: Take a peece of a Rade, or a Axer, with his knots and ioynts, and making a small hole in the side, powze into it eyther Honey, or some sweet thing, and lay it by the water: and when you see the Bees haue found it, and entred the hole for the flavour of the Honey, stoppe you the hole with your thumb, and let but one goe out at once, whose course you shall follow, as farre as you can see him, and this shall bring you part of the way: when you can no longer see him, let out another, and follow him, and another, and after another, till you come to the place. Other wise to set some little vessels with hony by the water: which when some one Bee or other hath hapned to taste, he giueth straight knowledge to her fellows, whereby by their flying in number, they come to finde out their dwellings. If you finde the Swarme to be in some such hole, as you cannot come at them, you shall drive them out with smoke, and when they be out, bring them downe with the ringing of a latten Bason, so as they may settle upon some tree, from

from whence you shall shake them into your Hibe. If the swarme be in some hole aboue in the branches, you may saue off the branch handsomely, and cobering it with a white cloth, place it amongst your Hibes. If they be in the body of the tree, then may you softly saue off the tree about the Bees, and afterwards, close underneath them: and being cobered as before, carry them home, stopping well the chinks and rifts, if there be any. He that seeketh the Bees, must begin in the morning, that he may haue the whole day before him to marke their labouring. Thus sorte of the kinds of Bees, and getting of them: now will I shew you of the placing of them, ordering, and keeping of them. The place for your Bees and your Hibes must be so chosen, as they may stand quietly and secret, standing specially in such place, as they may haue the Sunne in Winter, and in the Spring time alway at the rising, and such as is neither too hot, nor too cold: for the excess of eyther doth hurt them, but rather temperate, that both in Summer and Winter, they may haue moderate warmth, and wholesome ayre, being farre removed from the company of eyther man, or beast.

Standing  
for Bees.

For they most of all delight in quietnesse: beware beside, that there be no hurtfull creature neare them, as the Toad, that with his breath doth both poyson the Bees, and also draweth them to him; the Woodpecker, the Swallow, the Sparrow, the Mole, the Spiders, Hornets, Butterflies, Serpents, and Frogs.

What Vermin annoyeth the Bees.

Drive from thy Hives the hurtfull Lysart greene,  
Keepe Throshles, Hennes, and other Birds untrew:  
And Progne, on whose breast as yet is seene  
The bloody marke of hands that Itys slew.  
All these destroy thy Bees, and to their nests doe beare  
Such as they take in flight, so make their young ones chere.

Of such things as hurt your Bees, I will hereafter speak more, where I shall shew you of their diseases & harmes: in the meantime I will goe forward with the placing of them. The place where they should stand, would rather be in the valley, then very high: but so as the rebound of no Eco, doe hurt them, which sound is very noysome unto them: so shall they live with more ease.

The valley  
better for  
the Bees,  
then the  
hill.

ease and speed to the higher places, and come laden downe againe with licters of baile. If the seate of the house will so suffer, it is good to haue your Bées stand neare your house, and to be enclosed with a hedge, or a pale: but on such side as they be not annoyed with the sent of smoke, pyrie, or dunghill. The best standing, is within the sight of the master, by whose presence they are safest kept. For their better safety (if you feare them) you may set them a yard or more from the ground, enclosing them with little grates left open against every Hive, or so lettised with stons, as a Bee may easily come out and in, and escape both Birds and Water: or if you list, you may make a little house by for the Keeper, wherein you may lay your Hives for your swarmes, and other necessities meete for your Bées, setting néere to the Hives some shadowing Trees for them to swarme upon.

Faire water  
necesse  
fary for  
Bées,

If it may be, let them haue some faire Spring néere them, or else some water conueyed in a pipe: so without water they can neither make Honey, nor waxe, nor breed up their young.

Hearbs  
that Bées  
delight in

Round about the Bee-yard, and néere to the Hives set hearbs, plants, and flowres, both for their health, and profit: specially such as are of the sweetest and delicatest sanour: as Cithysus, Time, Cassia, Rosemary, Sabery, Smallage, Violets, Sage, Lavender, Pyrrhe, wilde Parierum, wilde Time, Balme, swete Parierum, Saffron, Beanes, Mustardseed, Poppey, Melilot, & Roses. And if there lie Ground néere it for the purpose, sow it with Rape seede, and Barley wheat: so they wonderfully delight in the flowres hereof. Plinie writeth, that Bées delight greatly to haue Beome flowres néere them: of trees they most delight in these. The Pine, the Willow, the Firre tree, the Almond, the Peach, the Pearre tree, & the Apple, and such as the flowres there of be not bitter. Of the wilde sorts, the Cerebinth, the Lentise, the Lind tree, the Cedar, and the Hawthorne. The best honey (as Palladius saith) is made of time: the next of wilde Time: the third, of Rosemary. You must remoue from your Bées, the Pew tree, Box, & the Cornel: Plinie would also haue the Olive away. Banish also all the kinds of Spurge: so with that, as also with the flowres of the Cornell, they fall into a flire and die. Besides you must suffer no Wormewood, nor wilde Cucumber to grow néere

nere them, so they both destroy the Bees, and spoyle the honey. Herbs  
noyforme  
to Bees.  
 And because the flower, or fruit of Elmes both specially hurt  
 them, therefore in such parts of Italy where plenty of Elmes  
 grow, the Bees do not long continue. Touching your hives, they  
 are made of divers fashions, according to the manner of the  
 country. Some are made round, some square, some three foot in  
 height, and one in breadth, made very narrow toward the top,  
 least the Bees should overlabour themselves in filling of them.  
 Some make their hives of Lanterne hoine, or Glasse, to the end  
 (as Pliny saith) that they may view the manner of their wor-  
 king. Varro maketh mention of earthen hives well plaistered  
 within and without with good Ore-dung, so as the toughnes &  
 ruggednes cannot displease them: but for all that, the earthen  
 hives be the worst that may be, because in Summer they be too  
 hot, and in Winter too cold. The best hives, are those that are  
 made of Oske, Wicker, or rindes of trees, because they keepe out  
 both cold and heat: the next are such as are made of straw and  
 Wents matted together, two foot in breadth, and so much or more,  
 according to the number of your Bees, in height. In some places  
 they make them of one peece of wood, cut and hollowed so; the  
 noyce, or of ioyned boxes, five or six foot in height, and these  
 neither are too hot in Summer, nor too cold in Winter. Of  
 these wooden hives, the best are those that are made of the  
 Figge tree, Pine, Ache, and Walnut, of such length (as I told  
 you) and a cubit in breadth. Besides, they would be covered  
 with either Lime, or Ore-dung: so; so (saith Florentine) you  
 shall keepe them long without rotting. You must also bore  
 them through stopewise, whereby the winde gently entering, may  
 drye up all cobwebs, or such like noyances: You must alwaies  
 have good store of hives lying by you, that may be removed, and  
 easily carried to where you list: so; the fixed, or standing hives, be  
 discommodious, as which you can neither sel, nor remove: though  
 Celsus saime to commend the standing hives, because they are  
 neither subject to stealing, nor burning, being made of Wicke, How you  
must place  
your hives.  
 or Loame. It is enough to have three rankes of them, one above  
 the other: so; the keeper shall have enough to doe to oversee  
 the uppermost. The part where the Bees doth enter, must  
 stand a little lower then the hinder part, so as the raine can  
 not runne in; and the water (if there be any) may easily boide.

And because cold both more annoy the Bees, then heate, you must arming your hives well behinde, against the heat and bitterness of the Sunne to winde, And let the Sunne come bountifully to them in the front. And therefore it is best for you to make the holes where they come in and out, as small as you may, that they suffer sorely for the bignesse of the Bees, partly for a keeping of cold, and partly to keepe out the Flies, Beets, Butterflies, Wats, Spithes, and such other buttfull vermine, that would otherwise destroy the Combes: wherefore it is good you have two or three such small holes together in every hive, for the continuallie of the Bees, and to restrain the enemy.

When the  
Bee resteth.  
The be-  
ginning  
and order  
of his tra-  
vaile.

Thus having declared unto you before their toyle, their diligence, and order of their travaile, I will now likewise shew you what time they begin to labour. In the winter time, from the setting of the seven Starres, till the beginning of the Spring, they keepe their houses, and come not abroad, by reason of the cold: in the Spring, they come straight abroad, & from that time forward (if the weather let them not) they never rest day. First of all, they frame their Combes, and Cellar, that is, they make their houses and chambers, whereof they make so many, as they think themselves able to fill: then fall they to building, and last of all, to making of honey. Their Cellar, they make of the flowers, trees, & plants: their house, of the gums and clamminesse of trees that are clew, as Willows, Elmes, Wax, Junces, Gumme, and Rozen: Aristotle saith, they make their Combes of Houses, their Cellar, of Gumme, and their Honey, of the dew of the Ayre, that falleth chiefly at the rising of the Starres, and that there is no house made before the rising of the seven Starres, & their combes of Houses, and that the Bees doe not of themselves make the house, but only gather the honied dew that falleth, because the keepers finde the Celles to be filled in some one, or two dayes: & that the house being taken away in the end of Summer, the hives are not found to be furnished againe: though there be flowers enough at that time. This, and much more hereof (saith Aristotle) whom Plinie following, affirmeth house to be made of the Ayre most of all, at the rising of the Starres, chiefly the Dogge shining out early in the morning: there, saie you shall finde in the morning betimes, the leaves of the trees

trees bebedwed with honie, as you shall likewise haue the Ap-  
 parrell, Bayze, and Beards, of such as haue bene early abroad  
 in the morning. Our Common people call it Manna, or Honey. Manna.  
 deto, cleaving to the leaves before the rising of the Sunne, as it  
 were Snow, or rather Candied Sugar. Whether it be the  
 sweate or excrement of the Bees, or a certaine spittle of the  
 Starres, or a iuice that the ayre purgeth from himselfe: how-  
 soeuer it be, I would to God it were such as it first came  
 from above, and not corrupted with the vapours and damps of  
 the earth. Besides, being sucked up from the leaves by the  
 Bees, and digested in their Stomachs (for they cast it up at their  
 mouthes) and also distempered with the sent of the flowers, ill  
 seasoned in the Hives, and so often altered and transformed,  
 losing much of his heavenly vertue, hath yet a pleasant and  
 speciall celestiall sweetness in it. The best Honey is of Time The best  
Honey of  
Time.  
 (as I haue sayd before) and good likewise of Cithisus, of the  
 Figges Tree very pleasant: Varro saith, they take not their  
 sustenance, and their Honey both from one. A great part of  
 their food is water, which must not be farre from them: and  
 must be very cleane, which is greatly to purpose in making of  
 good Honey. And because euer season suffereth them not to be Bees, their  
Winter-  
foode.  
 abroad, they must at such times be fed, least they should then  
 be forced to liue all upon the Honey, or to leaue the Hives  
 emptie. Some giue unto them Water and Honey, sodden to-  
 gether in little vessels, putting into it Purple woad, through the  
 which they sucke it, for feare of drinking too much, or drin-  
 king themselves: others, dry Figges, either stamped by them-  
 selues, or mingled with water, or the drope of Cyperus, or Rea-  
 sins mingled with Cloues, and tolls made thereof, or  
 with Honey: yea, I haue (some times) use (but in my fancie with-  
 out reason) to giue them Waxe balls. Whereof, as the Bees re-  
 quire great looking to continually, and their houses daily atten-  
 dance, so most of all they craue diligent regard, when they are  
 about to swarme, whereunto if you haue not a great and  
 eye, they will misgouern you, & make a new Master. And such  
 is the nature of Bees, that with euer Prince, is born a Com-  
 monwealt, which as long as they are able to traueile doe  
 as if it were disdaine the government and fellowshippe of the



Going a-  
way of Bees,  
and the  
tokens ther-  
of.

old Bees, which most hapneth when the Swarmes be great and lustie, and that the old Stagers are disposed to send abroad their Colonies: and therefore you shall by two tokens specially know when the new Princes with their people will abroad. The first, when as a day or two before they cluster and hang (specially in the evening) about the mouth of the hive, and seeme to shew by their comming out, a great desire to be gone, & to have a King, doine and Countrey by themselves: which, if you prepare them at home, they content themselves very well with it. And if the Keeper provide not for them, taking themselves to be greatly injured, they depart, and seek a new dwelling. To prevent this mischief, Columella willes you to looke diligently to them in the Spring time about eight of the clocke, or at noone: after which houres they commonly goe not away, and to marke betwixt their going out and comming in. The other signe is, that when they are readie to flye, or going, they make a great humming and noise, as Souldiers ready to remove their Campe. At their first comming out, they flye aloft, playing up and downe, as it were tarrying for their fellows till all their company come. Then, many times the old inhabitants, being wearie of their dwellings, doe leave their hives, which is perceived when they come so out, as none remaine behinde, and presently mount into the ayre; then must you fall to ringing of Pipes and Balcons, to scare, or bring downe the run-aways, who being amayed with the great and suddaine noise, do rather presently repaite to their old hive, or else knit themselves in swarme upon the branch of some tree to the place: then must the Keeper out of hand be ready with a new hive prepared for the purpose, and rubbed with such herbs as the Bees delight in, or sprinkled with little drops of hony (I have sene in some places used Creaime) and so shaking them into the hive, and covering them with a thiete, let him leave them till the morning, and then set them in their place. He must (as I told you before) have others ready to knit in a ready way to serve the turne without. And if so be you have no trees nor bushes growing nere the hives, you must thrust into the ground certaine boughes & branches for the purpose, whereupon they may knit

Bees delight  
in new  
hives.



and settle themselves, and rub over the boughes with Balme, or such pleasant hearbs, that when they (as I say) knit and settle, putting under the hive, and compassing them with some little smoke, you may cause them to fall into a new Country: for they will rather goe into a new hive, then into an old: yea, if you offer them the hive that they came from, they will forsake it for a new. Some of them will suddenly leave the hive without any tarrying, which the keeper may perceiue, if he use to lay his eare in the night time to the hives: for about three dayes before they goe, they make a great noyse, like souldiers ready to raise their Campe.

Signes of  
suddaine  
departing,  
and reme-  
dies.

And therefore when such noyse is heard, they must be very wel watched, whether they come out to fight, or to fly, the keeper must be at hand: their fights, whether it be among themselves, or one hive with another, are easily stichled:

A little dust cast up on high,

Doth end the quarrell presently.

Or Honied water, swet wine, Broath of Measins, or any pleasant liquour, wherein they delight, cast and sprinkled amongst them doth straightwaies part them. The selfe same remedies makes two Princes of them, being fallen out, to be quickly good friends againe: for when there hapneth many times to be in one hive sundry Kings, by whose dissention the whole number of the subiects, in the Princes quarrels, goe together by the eares, you must by all means seeke to remedie it, least by ciuill dissention, the poore people be destroyed. And therefore if you perceiue them often to fight, your best is to kil the headdiest of the dissention, and to appease the fury of the fighters, by those meanes that I told you before. And when the Partial swarme is settled upon some branch of a tree, look if they hang all together like a cluster of Grapes, which is a signe, that there is either but one King, or if there be moe, they be agreed: then you shal not trouble them, but take them into the hive: but if so be they hang in two or three clusters, like the Daps or Adders of a beaust, it is a signe there are diuers Paster Bees that agree not together: for which you shall seeke where you see the Bees to cluster most. Wherefore anointing your hands with the succs of balme, or Betwort, that they may abide you, thrust in your fingers softly amongst

Divers  
Kings in  
onehive.

The shape  
of the  
King.

To keep  
the king at  
home.

The Drone.

Time for  
taking the  
Combs.

Them, and the doing the Bees search well till you have found the  
king, leader of the contention, whom you must take away. What  
the colour and shape of the King is, I have told you a little  
before: it is something yonger then the other Bees, and lesser  
winged, of a faire and glittering colour, smooth, & without sting.  
Howbeit, some of them be Hagheards, also ill coloured, which are  
naught, & to be killed: Let the best (as he saith) weare the Crowne:  
who must himself also be deuyted of his wings, if he be too busie  
headed, and will alwaies be carrying his people abroad: so shall  
you, with the losse of his sayles, keepe him at home spight of his  
tatch, while he dare not so want of his wings venture out of the  
doores, & so shall he keepe his people at home. Dydimus writeth,  
that the Bees will neuer go away, if you rub the mouth of your  
Hive with the dung of a new calved Calse. To the same end  
serbeth it, if you stampe the leaues of wilde Olives, and Garden  
Olives together, and annoint the Hives in the evening there-  
withall: or if you wash the Hive & the walles with honey sodden  
with water. When an old stocke is come to a small number, &  
that there be not Bees enough to furnish the Hive, you must sup-  
ply the want with a new Swarme, destroying the King of the  
first swarme in the Spring, so shall both the swarms dwell toge-  
ther in amitie with the old Parents, as shal be shewed you here-  
after, where I meane to speake of repaying the stocke. The  
Summer being past, ensueth the time so taking of Honey, to  
which haruest the travaile of the whole tendeth. The time so  
gathering thereof, Columella teacheth to be then when we per-  
ceive the Drones to be driven out, and banished by the Bees: so  
thence they Drive the drouse Drone away. This Drone is an  
untimely birth, and an imperfect Be, but very like unto the Be,  
save that he is bigger bodied, lying alwaies idle in the hive, not  
labouring himselfe, but feeding like a lubber on the sweat of his  
fellowes, yet serueth he so: the breeding and bringing up of the  
young: which when he hath done, they thrust him out of  
the hive. Varro appointeth thre seasons so: the taking out the  
hony: the first at the rising of the seven stars: the second in Sum-  
mer: the third at the setting of the seven stars: this signe is when  
the hives be heauble, and that they be double furnished. You may  
make your conjecture by the Bees, when they make great noise  
within

within, and when you see them stand dauncing, and playing at  
their doores, as also, if looking into the Hive, you perceive the  
mouthes of the Combs to be covered with a Honey filme. Dydi-  
mus thinketh it to be the best time at the first harvest; the rising  
of the seven starres, or the beginning of May: the second, the be-  
ginning of Autumne: the third, the setting of the seven starres,  
which is about October: howbeit, these times be not allowaies  
precisely to be observed, but according to the forwardnesse of the  
season: for if so be you take the honey before the Combs be ready,  
they take it ill, & presently leave working. The time for gelding  
or dybing your Bees, is early in the morning: for you must not at  
nane trouble your hives. For this kinde of gelding of your hives  
you must have two instruments for the nonce, a foot and a halfe  
long and more: the one of them must be a long knife of a good  
breech, having at the end a bending crooke to scrape withall: the  
other must be plaine, very sharpe, that with the one you may cut  
the Combs, and with the other scrape them, & draw out whatso-  
ever dregs or filth you finde in them. And if your hives be not  
open behinde, you shall make a smoke with Galbanum, or dy-  
bung, being put into an earthen pan made for the purpose, small  
at the one end, from whence the smoke shall come, and broad at  
the other, from which you shall blow up the smoke from the fire,  
in such sort, as Columnella sheweth you. This pot you must suffer  
at the first, to smoke into the hive, & afterwards round about with-  
out, & so shall you dybe them. He that medleth in this case with  
the Bees, must specially keepe himselfe from lechery, & drunken-  
nesse, and wash himselfe cleane: for they love to have such as  
come about them to be as pure and cleane as may be. They de-  
light in cleanlinesse so much, as they themselves doe remove  
from them all filthinesse, suffering no filth to remaine amongst  
their labours, raking up in heaps together the excrements of  
their own bodies, which in the rainy daies, when they worke not  
abroad, they remove and throw out of the hive. If you see Was-  
picks by them they will sting all that come nigh them: Their  
anger is chiefly allwaged by the presence of those that use to  
them, at whose coming they were milder, being well acquaint-  
ed with those that are their keepers. If there be two swarmes in  
one hive, and agreed together, they hate two sorts and manner

Gelding or  
driving the  
Hives.

Bees hate  
thieves and  
uncleane  
persons.

Fashioning  
of the  
Combes.

of Combes, every swarme observing his owne order, but all the Combes so hang by the coses of the hives & sides, as they touch not the ground where the Bees use chiefly to walke, as I said before of the building of their Combes. The fashion of their Combes, is alwaies according to the fashion of their hives, sometimes square, sometimes round, sometimes long as the hives are, in which they are fashioned as in a mould. Plinie writeth, that there were Honey Combes found in Germanie, of right saite in length; but howsoever they be, you must not take them all out, but must use discretion in taking of them. Amongst our people in the first Bees harvest (if I may so terme it) they use with their crooked knife, to pare away no more but the emptie Celles, till they come to those that be full, taking heed that they hurt them not: & this they do in the spring. In the latter harvest, that is, at the end of Summer, they take the Combes full of Honey, in such sort, (as I told you) burning the old Bees, & alway keeping & preserving the yong swarmes. In the first taking, when the Beesdoves are full of flowers, they leave the first part of the Combes behind: in the latter harvest, when winter approacheth they leave a third of their Combes for the sustenance of the Bees. But this quantity cannot certainly be prescribed for all Countreies; but must be measured according to the abundance, or want of flowers. Dydimus Thaseus, thinketh good to leave them a tenth of their Combes in the Summer time, if the Hives be very full, otherwise, according to the proportion; and if they be emptie, not to meddle with them. Plinie would not have the Honey of the Spring time (which he calleth flower Honie) to be meddled withall, but to be spared. Others leave no Honie at all for them, because of the abundance of flowers that are then springing, which is the chiefe foundation of their Combes. Such as be skilfullest doe leave the Bees a twelfth part of their labour: and this they doe about thirty dayes after the swarme, which they make an end of commonly in May. The old and the corrupt Combes, are for the most part at this time taken away: and the sound, and such as are filled with Honie, left. In taking of the Honie at the later time of the year, they use to destroy the oldest stocks, to save the charges of feeding of them. This dying and getting of Hives is not commonly

monly used in the Countrey, but they rather, according to their custome, at the end of the yeare burne them, alledging for their authoritie an old English Proverbe of their stowe :

Drive Bees, and lose Bees : burne Bees, and have Bees.

And in some places they do stone them. When you have thus spoiled your Hives, you shall carry all your Combes into some handsome place, where you meane to make your Honey, & stop up all the holes and crevisses of the walles and windowes, as close as you may : so the Bees will be very busie to recover the prey. Whensoever you take your Combes, take that you strain out the honey the same day, while they are hot & new. The honie that you take at the full of the Moone (as Plinie saith) yieldeth most, and the sayer the day is, the thicker it is. The Combes being taken out, let them rather be warme, then heated, least by over-heating them, you straine out the Ware with the Honie : afterward, put them into a good strong bagge, and with a Presse or other Instrument made for the purpose, or with a Wicker Basket, presse out the Honie ; but see that before you presse it, you sever from it such Combes, as have in them young Bees, called with some, Crabbes, or any red or rusty doffe : for these with their evill wyce corrupt the Honie. When the Honie is thus strained out, it is put into earthen vessels, & suffered to stand uncovered a few dayes, til it have wrought, & cast up aloft all his Waxes, which you must often scum off with a little Riecke: but in many places they are not so curious, but tumble all together, & so sel it grosse as it is. The best Honey is alwaies in the bottome, as the best Oyle aloft, and the best Wine in the midst.

The best Honie was in the olde time thought to be in Athens. and in Sicill : it is now thought very good that commeth from Moscouia, and the North-east Regions. The Honey at the beginning is thin as water, and after the straining, it worketh like new Wine, and purgeth : at the twentieth day, it waxeth thicke, and afterwards is covered with a thin rine, or filme, where the froth of the purging is gathered together. The best Honey, and least infected, the Bees doe gather from the leaves of the Oke, the Lind tree, and the Ald. There is three sorts of Honey, the best kind is that which is called Authim, or flowre.

The best  
Honie.

Three sorts  
of Hony.

Bread cor-  
rupteth  
Hony.

The ma-  
king of  
Waxe.

The age of  
Bees.

flowre-hony, made in the Spring time: the next, is Summer  
hony, or hasty-hony, made in thirty dayes after the tenth of June  
when the Dogge begins to come in: the third is Heath-hony, a  
wilde kinde of hony, and not allowed, being gathered after the  
first showrs of Autumne, while the heath is flowred: & therefore  
like the Sandy hony. The best hony (as Diophanes saith) is  
cleare, yellowish. smooth in touching, and fine, roping, if it be  
drawen in length, & long sticking together, clammy, & hard to be  
got asunder: the hony that is of the worst making, is to be boiled.  
Bread, if it be dipped in it, both straight corrupt it and therefore  
take heed you put it not where bread hath bene. The fragments  
of the Coame that hath once bin pressed, being taken out, heated  
& strained againe, do make a second Hony, which you must put  
up, and keepe by it selfe, for spoiling of the other. Flaughtie, and  
counterfeit Hony is discerned by the burning, for ill hony bur-  
neth not cleare, as the said Diophanes witnesseth. The drosse that  
remaineth, after the pressing, after that you have diligently wa-  
shed it in sweet water, must be put in a brasse Caldron, & putting  
a little water thereto melted upon the fire, which when you have  
done, you must straine the Ware through a Sieve, or such like  
thing made of Straw, or Rushes: and after seeth it againe, and  
poyring it into some vessell with water, from whence you may  
easily take it, make it up in cakes, or what fashion you like. Pliny  
writeth, that the Coames must first be washed well, and after-  
ward dreyed in the dark, for the space of three dayes, & the fourth  
day set upon the fire in a new earthen vessell, so as the Coames  
be covered with water, and then strained through a Sieve: last of  
all, boyled againe in the same vessell, and the same water, and  
poyred into vessels with colde water, having their sides pointed  
with hony. The Ware will be very white after it hath stood in  
the Sunne, and bene twice sodden: you shall make it blacke  
with the Ashes of Paper, and being mingled with Vermillion,  
it will be red, and so otherwise coloured as you list.

Their age (they say) may thus be knowne. Such as are not  
above a yere olde, doe shine, & looke as they were newly oyled:  
the old ones be rough, shaggy, & wrinkled, loathsome, and ill  
favoured to looke upon, hoine it, for making of Coames, these are  
the best, Aristotle in his booke before mentioned, affirmeth, that

Bees



Bees live five or seven yeres, and that if a stocke continue nine or ten yeres, the keeper of them hath good lucke. Pliny writeth, that one stocke was never seene to continue aboue ten yeres, not though you supply the places of the dead every yere with new: for commonly in the tenth yere after the first hiving, the whole stocke dieth. And therefore to avoide the mischief of being utterly destitute, it is good to encrease the number of your hives with new swarmes every yere. And if so be your Bees, through sudden storme, tempest, or cold, lie dead upon the ground, you must gather them together into a platter, or a broad basin, and lay them in your house toward the South, specially if the weather be good; after, cast amongst them Ashes of fig tree wood, being something more hot, then warme, shake them gently up & down, so as you touch them not with your handes, & so setting the into the Sun, they will (as Varro sayth) quicken again. To whom Columella subscribing, addeth, that such Bees as you find dead under your hives, if you lay them up in a dry place all the winter, & bring them out into the Sun in the Spring, when the weather is faire, and sprinkle them with the foresaid Ashes, they will recover within a few houres. They that list, may prove it. I have not hitherto tried it. Marcus Varro holdeth opinion, that Bees are ingendred sometime of other Bees, & some-  
To revive Bees that be dead,  
Making of a Bees.  
times of the body of a young Bullocke putrified, exciting this  
Epigramme of Archelaus.

Of Steere that strangled is are children strangely bred,

Of Horse ingendred is the Waspes, and Bees of Bullocke dead.

The Horses breed the VVaspes, the Bullocks breed the Bees,

For a young Dre, or Steere, being strangled, corrupted, and cast into some such place, where the putrified vapour cannot breath out, and store of hearbs and flowres, agreeing with the nature of the Bees thrust into the body, as Time, Cassia, and such like. wherewith the vapour may be tempered, you shall hereof quickly have Bees, even as you may of the body of a horse likewise ordered, have Waspes and Hornets.

The manner how Bees are ingendred of a Bullocke, Virgil  
Bees made of a Steere.  
doth largely discourse out of Mago, and Demetrius. You must frame a little house foursquare, about ten cubits in breadth, & as much in heigh, with four windows, an every side one. A yong  
fat



for where being brought up hither, his Nose, his Eares, and all other open vents stopp'd, & filled with linnen dipped in pitch, must be beaten with numbers of clubbes to death, so as both the bones and the flesh, may be broken without any blood: for of the blood cometh the Wax. Afterward, the house being deepe strewed with Lime, & the Bullocke laid upon his backe, the doores and the windowes must be close shut up, & so plaistered, as there can no aire enter. Thre weekes after, the windowes must be opened on euery side, save where the winde bloweth strongest, & the light and the aire let in: when it hath bin wel cooled & refreshed, the windowes must be shut up again, & made as close as before: and being opened the eleventh day after, you shall find the house full of Wax, and nothing left of the Dre, save the hoynes, the hayze, and the bones: they hold opinion besides, that the Rings are engendred of the braine, and the other Waxes of the body.

Signes of  
Sicknesse in  
Bees.

The signes and tokens of their health, as if they be libely, quicke, and many in number: if their workmanship be neatly and equally wrought: if they goe about their businesse cheerefully, and if they looke faire and smooth. The signes of their not being in health, is, if they looke loathsomely, be tough & hayzie, except in the time of their labour, when they commonly looke like labourers, or be browis, or if you see them carrying out of dead carkasses, and following the coyses after the mourners, or that you heare no noyse, nor stirring amongst them. These signes when you see, Columella willethe you to giue them meate in little troughes of Rades, specially Honie sodden, and ground with Galles, or Roses. You must also to heale them, perfume them with Galbanum, Storax and Beniamine, Resins, or olde strigges of Grapes. If the Ring happen to bye, the common people waile and mourne with great heavinesse, neither will they make any provision for their owne sustenance: and therefore if you feede them not, they will famish themselves.

The diseases  
of Bees,  
and the  
remedies.

They are many times infected with the Pestilence, against which you have no other remedie, then to sever the Hives farre asunder. Their chiefest & early sicknes, is in the beginning of the spring, when the Spurge and the Elm do both flower: for as upon new fruites, so at their first comming abroad, entised with these new flowers, being almost hunger staruen with the

Winter

winter pasted, they sūd so greedily as they fall into a Flie, where-  
of if they be not quickly remedied, they die. For Spurge doth  
lose the bellies of all other creatures, but the flouzes of Cline  
hyingeth only the Flie to the Be. And therefore in such Coun-  
tries, where there is great plentie of these trees, the bees cōtinue  
but a while. Columella teacheth you against this disease, to  
give them Rosemary sodden with water and Honie: some a-  
gaine use to give them the skale of men, or Bullocks: as also  
the graines of the Pomegranate beaten, and sprinkled with  
Wine or Keasins, with the like quantitie of Spuma kneaded  
together, and given them in sharpe wine, boyled in an earthen  
bessell, & powdered into little Rodes. Virgill describeth an hearbe,  
called Aumellus, with a yellow stalk, and a purple flouze, the  
iurce of whose roote being sodden in old Wine, and strained out  
is very good to be given them: Columella out of Higimus,  
teacheth to remede them in this sort: First, to take out all the  
rotten and corrupt Combes, and to give them fresh meate and  
after to perfume them with smoke. It is good also to put to a de-  
cayed hive, a new swarme, as I said before. Many times they  
die of a disease which they call, The great devouring, which  
happeth when they have made so much ware, as they think they  
shall be able to fill, and afterwards, by storme & tempest, many  
of them be destroyed, so that the remaine sufficeth not to fill the  
Combes, whereby the emptie parts of the Combes become meth  
rotten, and by little and little infecteth both the honie and the  
Bees: For which the onely remedie is, either to put in a new  
swarme to fill up the cells, or if you have no such swarmes, to  
cut away part of the Combes before they come to be naught,  
which you must do with a very sharpe knife, for feare of displa-  
cing the rest of the Combs. A cause beside many times of the  
death of the Bees, is their too much prosperitie, as when there  
are hives yeres great abundance of flouzes, and the Bees so  
bustle in their sūding, that they forget their breeding, who over-  
wearying themselves with travaile, they die, not leaving any  
broode behind them. It is called Blaphonia, when either by  
sickness, slothfulness, or barrenness, they leave no fruit behinde  
them. To remede this: It is good every third day, to shut up the  
hives close, leaving but very smal holes, out of which they cannot  
crape,

swipe, so shall they be forced to looke to their hounds, when as they cannot otherwise range abroad. Many times besides they are the cause of their own deaths, when perceiving their honte to go away, they feede too greedily. Their own honey doth also many times destroy them: for being touched with it on the back, they are solimed, as they cannot stirre: and Dyle doth not only kill Bees, but also all other like creatures, Flies, & Wormes. They hate all filthe saucies, and King such as smell of Spent-miento: they are often besieged with Waspes, Hornets, & great Comites: the Swallows doth oftentimes spoyle them: the Woodpecker doth with his long tongue, thrust into the hibe, liche up their honte: & wibers other Birds (as I have said before) among them. The Wode bloweth them, and sucketh them up at their own doores, who sustaines no hurt by their stinging. Whelps are also hurtfull and troublesome to Bees, in whose flicen they tangle themselves, as they can hardly get out.

Concerning  
their hives.

As what says they are to be written and gelded, it is shewed before: but at this time, & till the twelfth of September, the hives must be opened every tenth day, and smoked. The hives being thus smoked, you must refresh the Bees, with sprinckling & casting into the empty parts of their hives, very fresh and cold water: and if any thing remaine, not washed away, you must swipe it out with a Goose wing. Besides, the Wotches, if they appeare, must be swaped away, and the Butterflies killed, which dwelling in the hives, are commonly a bane to the Bees: for they both eat up the Ware, and with their dung doe breede a kinde of Worme that they call Hibe-mothes. These Butterflies, as Columella teacheth, you may when the Pallots bloweth (at which time there is greatest number of them) destroy in this sort. You must have a vessel of brasse, very high & straight, narrow necked and mouthed, in the bottome whereof you must have a light, and set it in the evening nere unto your hives, and you shall see all the Butterflies straightwaies fall to the light, and while they play about the flame, they burne themselves, while they can neither get up, by reason of the straightnes, nor down the fire, by means of the brasse walles. Betwixt the rising of the Dogge, and of the Beareward, which are almost fifte daies, you must take good hede your Bees be not spoiled by Hornets

To destroy  
Butterflies.

Hornets, which at that time lie in waite for them, euen at their owne doores. After the rising of the Bearward, about the twelfth, or fourteenth of September, is the second harvest of your Honey from that time, till the setting of the seven Starres, which is about fortie dayes, the Bees do provide for their winter store, of the flowers of Heath, Cammarishe, and other bushes and shrubs, of which provision you must take nothing, lest you discourage them, and drive them away: from the setting of the seven Starres (which is about the entrance of November) the beginning (if we may beleue Plinie) of winter, the Bees live all the winter long upon such Hony as they have laid up: at this time, the Hives must be opened and cleansed of what so ever filth is in them, and diligently repaired: during the winter time, your Hives must neither be opened nor stirred, and therefore in the end of Summer, while the weather is yet milde and temperate, your Hives being made cleane in some stony day, for that you shall under them certaine close covers that may reach to the very bottome of the Coombs, not leaving any void space, whereby the Hives shall be the warmer: When you have this done, close up every rift & open place with Clay, and Bullockes dung mingled together, daubing it all over without, leaving onely a little hole to come in and out at. You must arme them also against the cold tempest, with good covertures of Straws and Boughs: Some use to put in the Hives small Birds being dyaed, which with their feathers keep the Bees warme all the winter, & therewith, if they happen to lacke food, they feed themselves sufficiently. Yea, it hath bene sene, they have so fed upon them, as they have left nothing but the bare bones: howbeit, as long as their hony sufficeth, they never meddle with the birds. It is very good and necessary (as I told you before) to set them meat in little Troughs or Pipes, to defend themselves against famine. When Winter is past, in the space of forty dayes, they make an end of all their hony, except their Winter deale the more liberally with them. It hath often also bene sene, that their Combes being emptie, they have continued fasting, till the Ides of February, and cleaving to the Comber, as if they were dead, yet have retayned their life: but least they should lose it altogether, it is good to poison them in

Not stirring of Bees in Winter.

some

some sweete liquours by little pipes, whereby they may sustaine their liues, till the Swallow with her appearing, promise a welcomer season.

After which time, when the weather will suffer them, they begin to sleeke abroad for themselves: for after the Sunne is in the Equinodiall, they neuer rest but trauell painefully every day and gather flowres, and necessities for their breeding.

Besides, because few places are so fruitfull, as to yeld flowres both Summer and Winter: therefore in such places, where after the Spring and Summer (at which times, both Beanes, Peas, Tillows, and other plants and hearbs, in every place do flowre) the flowres doe faile, they are carried of diuers (and that in the night, as I told you before) into such places, where as there is good store of late flowering hearbs, as Lime, Wilde Marigold, and Waverly, where with they may be fed, and gather food at their pleasure: and as Columella writeth, that Bees in the olde time, were brought from the fields of Achaia, to the pastures of Athens, and so transported in diuers other places. So may we with us carry them from places where the flowres be consumed in the Spring, to the Summer flowres, as Clover and such other: and after that, about the end of the Summer, to places furnished with Heath, Tamariske, and such other late bearing flowres. For the auoyding of this inconuenience of carrying from place to place, I will shew you in what sort I haue ordered my Bee-yard at home. And because Master Hersbach hath shewed you before in his Garden many good hearbes, and yet not whereto they serue, I will shew you a few plants, that I haue set about my Bees, seruing both for their commoditie, and the health of my household: I haue chosen of a great number, such as be most necessarie, and of greatest vertue: whose speciall vertues, and wonderfull workings, given onely by the most gracious and bountifull framer of the world, and being as it were sucked and draine out by the carefull toyle and diligence of the Bee, must needs adde a greater perfection to their honte & their ware. I haue first enclosed the yard where my bees stand, with a Duckst-hedge made of Black-thorne and hony-suckle, the one seruing the Bees with his flowres at the beginning of Spring; & the other at the latter end of Summer. The first, the  
Black-thorne



For want  
of Treacle,  
you may  
take the  
whole  
dramme,

that it is more ragged, and indented round about. If any man  
be suddenly infected with the pestilence, Fever, or immoderate  
sweat, let him take of the root of this Angelica in powder, halfe  
a dram, and putting to it a dramme of Treacle, mingle them  
together with three or foure spoonfulls of the water distilled of  
the said roote; and after he hath drunke it let him lie a day sweating,  
fasting, so: the space of three houres at the least: this doing, by  
the helpe of God, he shall escape the danger: the roote steaped in  
Vinegar, and smelt into, and the same Vinegar sometimes  
drunke fasting, doth preserve a man from the pestilence: to be  
short, the root and the water thereof, is soveraigne against all in-  
ward diseases, it scoweth away the collections of a Pleurisie  
beginning, helpeth Ulcered and corrupted Lungs, and is good  
against the Collicke, Strangurie, and constraint of Urinary  
Purgations, and for any inward swelling, as inflammation: the  
iuyce thrust into a hollow tooth, allwaigheth the paine, the water  
dropped into the eare, doth the like: the said iuyce with water  
put into the eye, quickeneth the sight, and taketh away the thin  
skinned membrane that covereth the eye, Helius a most present  
remedy in all deep and rotten sores, is the iuyce, the water or  
the powder: for it cleareth them, and covereth the bone with  
good flesh. It is called in the old time Panacea, or Healer. Next  
unto this Angelica, hath a growing in great plenty, Cardus  
Benedictus, or blessed Thistle, which all Physicians do commend  
for sundry and great vertues, affirming that it was first sent out  
of India to Fredericke the Emperour, for the great vertue it had  
against the Peasch, or Scirrhus, being eaten or drunke.  
As betwixt they say, it helpeth against the Doying, or gadinefle  
of the head, maketh a good memorie, and restroeth the hearing.  
For the power of his great force against poison, they bring forth  
a young woman of Pavy, that having binaires eaten of a poi-  
soned Apple, and therewithall so smollen, as no Treacle, or  
medicine could cure her, was at the last restored to health  
by the distilled water of this Thistle: and likewise that a  
boy, into whose mouth as he slept in the bed, happened an  
adder to crepe, was saved by the drinking of this water,  
the adder creeping out behind, without any hurt to the  
child. In the they affirme, that the leaves, iuyce, seed,

Cardus  
Benedictus.



Penigraffe.

Scabious.

and water, healeth all kinde of poysons, and that the water hath  
healed a woman, whose breast was eaten with a Canker: to the  
very ribbes. I have also set into this little peece of ground, great  
steepe of the heerde called Hemuloria, and Penigraffe, which grow  
very close by the ground, having upon a long string little round  
leaves standing directly one against the other, and a yellow  
sausage, like the Cucumber. It is a sober, signe herbe for hea-  
ling of tumours, not only outward and greivous tumours, but  
also inward sores and ulcers, specially of the kidneys, whereof  
there hath bene great number. I have also written, that he hath  
sore haught and desperate wounds cured with this herbe,  
being boiled with Honey and Wine, and saith: It healeth  
excorsiations of the Breast and Kidneys, and may be well given  
to those that Cough, and are short breathed, and to little children  
affected with the wet Cough, who by reason of their tender age  
may take no stronger medicine. I have seen great benefit of  
it, growing by the Chancel in Wiche, about great Peckham in  
Kent. I have also seen them growing, Scabious, and herbes that  
groweth commonly in Wales, with a longed leafe, being raised  
upon the ground, and thrusting out in summer a long stalk,  
with sundry branches, the leaues growing in blew knobs, or  
buddes, like many Cokes. This herbe being sodden with  
Wine, and drunke, both helpe the Pleurisie, against which  
disease, the women of the country, that many times take  
upon them to be great Doctresses in Physicke, doe still the  
water thereof in May, and give it to be drunken at each time,  
two or three spoonfulls, not only against the Pleurisie, but a-  
gainst inward impostumes, Coughes, and all diseases of the  
breast. Against impostumes, divers (as Tragus writeth) doe  
make this composition: they take a handfull of Scabious, the  
herbe dried, of Liguerrise cut small an ounce, three Figges,  
Rennell seed an ounce, Anised as much, Oyl halfe an ounce;  
these they lay a night in water: the next day they boile them, til  
a third part be consumed, and after making it Thicke with  
Sugar, or Honey of Roses, they give it warme in the morn-  
ing and Evening: whereunto they say, the impostume is  
ripened, made soft, and coughed out.

It is called of some Feucrinum, & Veronica, as it is supposed of Veronica.

a certaine French King who was thought by the Iuyce thereof, to be cured of a great Leprosie, it is called in English *Phuellin* it croppeth into by the ground, as *Monticra*: both, & beneath a leafe like the *Stachis* thyme with a blissh of speckled flowers, with a seed inclosed in little papethes, like a *Staphis* purple, and groweth commonly under Oles. *D. Hieron* testifieth, that the saies thereof, is marvellous against the *St. Illure*, and contagious ayres, and that he himselfe hath oftentimes proved. The water of the herbe *Staphis* in white *Urine* and distilled, therewithall he hath cured many *Scabs*, but burning and pestilent *Scabs*, as *Wollen* young men, *Scabs* also *Phases* *Trachis* egg, commended to be singular good for the distillation of the *Spleene*: the *Staphis* and *Cerphila* give it with great profit made in powder, and mingled with *Salt*, to the *Catarrh* of the *Liver*: being mixed in *Urine* and distilled it is a most perfect remedia in all pestilent *Scabs*: being given three ounces thereof with a little *Aceto*, and after laid to warme in bed, and small coberet, it opposeth the paine by sweat, and drieth it from the heart. The water of this herbe taken certayne daies together, the ounces at a time, helpeth the turn sick goodness of the head, drieth the same, purgeth blood, warmeth the stomach, openeth the stopping of the *Liver*, healeth the distillation of the *Lungs*, and *Spleene*, purgeth the *Uterus*, the *Spacie*, and the *Bladder*, it drieth out sweat and venome, helpeth the *Hemise*, the stone of the *Uriner*, and other grievous diseases.

*Ceriphilata*

Now shall also have amongst these plants of mine, the good sweet herbe *Ceriphilata*, or of some *Benedicta*: of others *Sana-winda*, called in English *Aven*, whose roots together it be greene, as other, resembleth the *Clote* in colour: the leafe is jagged, rough, of a darkish greene, and not much unlike to *Agrimony*: the flower is yellow, and after the falling thereof, leaveth a quickly knoppe like a *Hedge-hogge*: the root the longer it hath grown, the sweeter it is: the speciall use of this root in some countries, is to be put in *Urine* in the *Spring* time: for it maketh the *Urine* to taste and savour very pleasantly: which *Urine*, as many hold opinion, both glad the head, openeth the obstruction of the *Liver*, and healeth the

Stomacke

Stomache that is obstructed with cold and grosse humours: this root boiled in Wine & given warme, both cease the griefe of the stomache, as the belly proceeding of either cold, as indur. Water Bees  
sony.  
 Said by this hearbe, hath I planted the great Water Beesony, called of some Ocimifolium, of Mathiolus, Scrophularia Maior: the flowers in colour purple, and in fashion like the shell of a snail: it flowereth in June and July, and groweth most by waters in shady places. Tragus teacheth to make a speciall ointment therof, serving against all scabbies and sores, wherein he saith, he hath seen people so mangle & they have learned even Hesperia to be cured: his ointment is this, take the hearbe, rootes, and all gathered in May together, and well cleansed from all filth, stamp it, and straine out the iuyce, & keepe it in a narrow mouthed Glass well stopp'd, wherein you may keepe it a whole yeere, and whensoever you list to make your ointment, take of the same iuyce, of Oile, and Ayre, of each a like quantity, & boile them together upon a Chafin dish of coales, stirring them well, till they be incorporated, and so use it. Mathiolus teacheth to make a singular ointment therof against hernels, the Kings evil, and the Hemerodes: his ointment is this. You must gather the rootes in the end of Summer, and after that you have made them very cleane, stamp them together with fresh Butter & putting them into an earthen vessel close covered, let them lay in some moist and dampish place, suffering it there to remaine for the space of sixtine dayes: afterwards let the same Butter be melted with a soft fire, and being well strained, lay it up for your use. There have I also another excellent hearbe, called in Latine Cardiacs, I knowe no name for it in English, except you will call it Mother-wort: & indeed it is the very true Mother-wort: it groweth by high waies, and nere to stone walls, it hath a leafe something like a Pettie, but more indented, the leaues next to the roots being jagged like the Crow-sote: it groweth bushing with many stalkes, I have seen it plentifully in Worry, and some stowe of it about Maidstone in Kent: it is of great force against any sickness of the heart, whereof it taketh his name: it helpeth Crampes, and Palles, it cleanseth the heart from steame, it killeth Wormes in the body, openeth obstructions,

strutions, p<sup>ro</sup>uoceth to the, and belonem courses: being made in powder, and a spoonfull of it given in wine, it wonderfully helpeth the hard labours of women.

Whosoever is troubled with belching of waire, and weakness of stomache, and these whole stomacks retain not their meate, or whosoever take too much belching from their stomacks, and is therewith often troubled, let them continually use Betony, either the hearbe or flowre bogled in wine, or the water distilled, or the Conserue (as they call it) of the flowres. And if so be you lacke the Conserue, or the water, you may use the dry hearbe in powder, either by it selfe, or with honey: women that are troubled with the P<sup>er</sup>io<sup>d</sup>es, may use this hearbe for their remedie. To be short, the flower, leafe, and roote of Betony sooven and cunke, or whosoever you will, in Elegancie, Conserue, Drop, Potion, or Powder, as you list to take it, is singular good in the diseases of the stomache, Liver, spleene, Kidnies, and Bladder, it scith the P<sup>er</sup>io<sup>d</sup>es from obstruction, and driveth thence all hurtfull moisture. For consumptions of the Lungs, Coughes, Droplics, continuall and putrified Fevers, proceeding from the stomache, bogle the leaves and flowres of Betony in ponied water, and you shall have present helpe. Thus have I shewed you what kinde of hearbes I have planted about my B<sup>ee</sup>, to the end they should have some at hand of the sweetest, and the wholesomest: I have shewed you also the vertues of the hearbe, the flowre, and the water, that you may use it for your own commoditie: onely this warning I give you, that you doe not distill them, as the unskillfull doe, in Killes of Lead, Tinne, and Brasse, which poisoneth and spoileth the water, but in Glasse Stills, set in some vessell of water upon the fire, whereby your water shall be most perfect and wholesome. The difference of these two distillings, appeareth plaine: for example in Wormewood, which if you distill in your comon Stillatorie, the water cometh out swart, having gotten a corrupt quality by the nature and corruption of the Metall: whereas, if you doe it in Stills made of Glasse, looking that the Glasses be well closed round about, your water shall have the very taste, savour, & p<sup>ro</sup>p<sup>er</sup>ty

percy of the Bees. With these Glasse stills you may so open  
your fire, as you may draw out of every hearth, the Water,  
Spirits, Oyle, and Salt, to the great comfort of sick and disea-  
sed persons. I set besides great plenty of Honey, Beath, La-  
mariske, and without the Weapard, Broom, in whose flowers  
the Bee much delighteth.

**FINIS.**

*Soli Deo honor & gloria*

**Olde English Rules, for  
purchasing Land.**

*Who so will be wise in purchasing,  
Let him consider these points following.*

**F**irst, see that the Land be cleare,  
In title of the seller.  
And that it stand in danger  
Of no womans Dowrie.  
See whether the Tenure be bond or free,  
And release of every feoffee.  
See that the seller be of age,  
And that it lie not in mortgage.  
Whether a taile be thereof found,  
And whether it stand in statute bound.  
Consider what seruice longeth thereto,  
And what quitrent thereout must goe.  
And if it be come of a wedded woman,  
Thinke thou then on covert baron.  
And if thou may in any wise,  
Make thy Charter with warrantise,  
To thee, thine heyres, assignes also,  
Thus should a wise purchaser doe.

**F I N I S.**

THE *old Couer*  
VVHOLE ART OF  
H V S B A N D R Y  
CONTAINED IN  
FOVRE BOOKES.

*Viz.*


- I. Of the Farme or Manssion House, Offices and accom-  
modations of Earable ground, Pasture and Medowe.
- II. Of Gardens, Orchards, and Woods.
- III. Of Breeding, Feeding, and Curing of all manner of  
Cattell.
- IIII. Of Poultrie, Fowle, Fish, and Bees, with the whole  
art (according to these last times) of Breeding and  
dyeting the Fighting Cock, and the art of Angling;

First written by *Conrade Hereshatch*, a learned Nobleman, then  
translated by *Barnaby Googe* Esquire, and now Renewed, Cor-  
rected, enlarged, and adorned with all the experiments and  
practises of our English Nation, which were wanting in the  
Former Editions.

---

By Captaine *Garuase Markham*.

---

All the new Additions you shall find to begin with this marke  and to end  
with this \*.

*Gratum Opus Agricolis.*

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L O N D O N,  
Printed by T. C. for *Richard More*, and are to be sould at his Shop in S.  
Dunstons Church-yard in Fleetstreet. 1 6 3 1.



like the Onyon, but not hollow, the stalk round, and the flowres on the top in a round tuft where the seed lyeth. Carlicke groweth both of the head and the seede, as the Onyon & other of this kind doth. It is commonly sowed in February or March, according to the disposition of the weather, as the Onyon is. It would be set in the uppermost part of little narrow ridges, the Cloves being distant foure or five inches one from the other, & not very deepe. After when the Cloves have put forth the little strings, or when their blades are come up, they must be well raked, for the oftner ye do so, the greater they will be: but if you will have the heads the greater, befoze it grow to stalk, you shall winde & weath the graine blades together, & tread them to the ground, so that continuall treading upon them wil make them the greater. In October the Cloves must be plucked asunder, & set in row upon high borders, that they may scape the danger of the winter stormes. They say the scent of them will cease if you eate after them the roote of Beets tolsted at the fire: thus saith Pliny out of Menander.

**T H R A.** What hearbe is that yonder, that commeth up so hie as a man may make a staffe of the stalk, the leaves large and round, the flowre in shape seeming to compare with the Rose?

**Mallowes.** **M A R I V S.** It is Holioke, or Garden Spallow, in Latine *Malva hortensis*, in Dutch Peppel, in Italian & French almost as in Latine. And it is the same that Horace taketh to be so wholesome for the body, and which of Hesiodus & Martial is so highly commended.

And also which is more wonderfull, in it the leaves turne about with the Sunne, so that it may serve instead of a Dyall, declaring by the turning of his leaves what time of the day it is, though the Sunne do not shine, which the Philosophers thinke to be done, by the drawing of his moisture. In Affrica, as Pliny writeth, it commeth in seaven moneths to be like a young tree, and serves well for a walking stalk. It is sowed in October, or in the end of Summer, as also at other times, that by the coming on of winter, it may be restrained of his high groweth: it reioyceth in rich and moist ground, and

and must be removed when it commeth to have foure or five leaves, it groweth best when it is young: when it comes to be greater, it dies in the removing. The use it both for the pot and for sallets, the taste is better when it is not removed: you must sow it but thinne for growing too ranke, and in the midst of them, you must lay little clods or stones, it requi- reth continuall raking, and maketh better the ground where it growes.

Next these I place Purslaine which is an excellent Sallet hearbe and loveth a fertill soyle, and though it may be sowne almost in any month, yet the warmest is the best, as April, May, June or September. Buck-athes are an excellent meaneure for them or for any other Sallet hearbe, but above all they love drie dust and house sweepings; they are apt to shed their seede, whence it comes that a ground once possess of them will sel- dome want them, they may also be removed, and will pro- sper much the better.

The Latines call it *Portulacum*, with the Italians it hath the Purslaine, same name, in Spanish *Verdolaga*, in French and Dutch *Por- chelle*, it is sowed in Gardens, and well ordered doth grow the better, and spreadeth the farther, it hath a blacke seede growing in little greene cups.

Buglose is at this day with the Apothicaries called *Bozage*, Buglose, though they differ something in the slowre, and in very darde they are two sundry Hearbes: for some call the common *Bozage*, the lesser Buglose, and the greater Buglose is thought to be that which Dioscorides calleth *Circium*, the true Buglose: the slowres of both sorts are used in Sallets and in Wine, because it maketh the heart merry, and therefore is called in Greeke *ivoposvvn*, that is to say, gladnesse: the leaves are also used in dressing of meates, it is sowed about March, and once sowne it will never away, there is also a wilde kinde of it.

Next are Strawberries, whose leaves are an excellent pot- hearbe and the fruit the most wholesome berrie, this hearbe of all other would be set of the plant and not sowne, for the oft chang- ing and removing of it causeth it to grow bigger and bigger, whence it comes that we doe use to bring rootes out of

the Woods, which being set and planted in the garden, prosper exceedingly two or three yeres together: and after, we either remove them againe, because they waxe wilde, or set the wilde in their places: and so have we them to yeld their fruit twise in a yere, in the Spring, and in the end of Summer. And although it groweth of it selfe in shadowy woods in great plenty, as if it delighted in shadow of Trees, yet being brought into the Garden, it delighteth in sunny places, and good ordering, yielding a great deale more and better fruit: it creepeth upon the ground without a stalk with small strings coming from the roote, with a white flower, and a leafe like a Trefoile, indented about. The berries, which is the fruit, are red, and taste very pleasantly: the Dutch men call them Erubern, the Frenchmen Fresles. There is another fruit that groweth something higher, whose berry is also like the Strawberry, Dioscorides saimeth to call it Rubus Idæus, the Berry of Ida, because it groweth in great abundance upon the Mountaine Ida. It is full of prickles, as the other brambles are, but soft and tender, full of branches and whitish leaves, it beareth redde berries, something paler than the Strawberry, and very pleasant in taste. The Dutchmen call it Imberen, the Frenchmen Frambosas.

Raspes.


 Liquerise.

Next this I place Liquerise or Licoriz so called of the English who (for the small quantitie they have growing) have the best of all nations: In Latine Dulcis Radix in Italian Regolizia, in Spanish Regaliza, in French Reclisse, in Dutch Claris, or Susholts.

Small Reazins

It groweth very plentifull about the Peine, It is set of young springs of the roote: as the Hoppe is, in drie light ground and sunnie. Next this I place smal Reazins, called in Latine Ribes, which we call at this day Ribes, and the Dutchmen Saint Johns pearle, because about Christmas it is garnished with red and rich berries, having a tart taste, quenching thirst, chiefly, the raging and extreame thirst of febers, and cooling the stomacke, which the Apothecaries in Sugar or Honey haue all the yere: its thought it was unknowne to the old Writers: but now a common bush used for enclosing of Gardens, and making of Borders and Arbours: it will easily grow,

grow, but that it is something troublesome, by reason of his sharpe prickles to be bent about Sommer-houses.

MARIVS. Melons (which some, because they are fashioned like Apples, call Pommes) are of like kinds of Cucumbers, and so are the Pepones, which the Frenchmen call Pompeons. The Cucumbers are called in Latine Cucumer, in Italian Cucumero or Gedruolo, in French and Dutch Cocumbre. They change to Pompeons, or Muskemillions, from which they only differ in shape and greatnesse: when they exceed in greatnesse, they become Pompeons, and when they grow round, they are Melonpompeons: all these kinds are called by some writers Melons. The Grecians call all the sorts, as well Cucumbers as Melonpompeons, by the name of Pompeons and Melons, though there are some that make a difference betwixne Pompeons and Melons, neither doe the learned yet thoroughly agree upon these names, nor can it be certainly said what kinde the old writers meant by Pompeons, and Melonpompeons. Pompeons doe creepe along upon the ground with rough leaves and yellow flouze, and are pleasant to be eaten when they are ripe. The sweetest sort of them they call Succrino, or Muskemillions. The Melonpompeons are supposed to spring first in Campania, being fashioned like a Quince. This kinde hangeth not, but groweth round, lying upon the ground, and being ripe, doe leave the stalk.

Some Cucumbers are called Citrini, of their yellownesse when they be ripe and also Citruli, or Citreoli, they grow all in length, and are spotted as the Citrons are: some be called Marini, and be called in Italian Cucullæ Marinæ, the seeds whereof is to be eaten before they be ripe: they are cut in pieces, and pottage made of them, not much unlike in fashion to the Melon. There is also another kind of Cucumber of a huge compass, almost as big as a bushell: the soldiers and hardest folke in Italy, use to carry great peeces of them to the field with them to quench their thirst. You must set all these kinds in March, the seeds must be set thinne, two fote one from another, in watric ground well dunged and digged, especially sandy ground: you must lay them in aslike, or water and Honey, three dayes; and after drie them and sow them, so shall you have them very pleasant. They will

Gourd.

have a very sweet savour, if their seedes be kept many dayes among Roseleaves. Your Cucumbers shall be long & tender, if you set under them water in a broad vessel, two handfulls under them. They delight in water so much as if they be cut off, they wil yet bend toward it, & if they hang o: have any stay, they will grow crooked, as also if you set oyle by them, which they greatly abhorre. The flowers being suffered to grow in pipes, do grow a wonderfull length. They love not the Winter no more then both the Gourd, whereunto they are almost like in nature: so: the flowers, the leaves, and the claspers, are like of them both: but the Gourd is more busie in climbing, so that with hasty growth, it spreadeth quickly over the hearbes and Summer-houses, running up by the walls, and mounting up to the very Tiles of the houses, having a great fruit of a monstrous bignesse: hanging by a small stalk, in fashion like a Peare, and graine in colour, although when it hath flowered, it will grow in what fashion you will have it: they say, there hath bene some of them nine foote in length. The round ones also grow to be used for great vessels: the rinde of the new ones, is soft and tender, but of the old ones hard, whereof when the meate is out, scavailers make great bottles to carry drinke in. The Gourds that are used to be eaten in Summer, are sundry in shape, some are round, some long, some broad: and though the fashion be divers, yet the nature is all one: so: it is made by Art to grow in what shape you will, as in the forme of a creeping Dragon, or what you list: they are called in Italian Zuma, in Spanish Calabaz, in Dutch Knitbich, in French Une courge. The seedes that the Gourd beareth next to the stalk (as Palladius saith) are longest, they in the middlest round, and those that lie on the side, short, broad, and flat: if you set the sharpe end of the seede downward, as Columella saith, you shall have them both greater Gourds and Cucumbers. It delighteth in a moist, rich, well dunged, & well watered ground. That which groweth without water, brings the pleasanter fruit: and that which hath water enough, needes the lesse looking too. The flowers where they be set, must be digged a foote & a halfe deepe, the third part whereof must be filled with straw, and then with good rich mould: it must be filled to the middlest,

middlest; then the sēdes being set, must be watered, till they be sprung, and after, earth laid to them till as they grow, till the furrow be filled. They must be set thinne, two foot a sūder, at a tūmeth up in five or seaven dayes after the setting. Those that are set in drie ground, must be very well watered, therefore they use to set by them earthen pets full of water, with ragges or clouts in them to water them. When they be a little grown, they must have helpes set by them to climbe upon, the longer they be, the better the meate is. You must beware there come no woman nere where you set them, for their presence doth greatly hurt them. Those that you keepe for sūde, you must suffer to remaine upon the stalks till Winter, and then gather them; and drie them, eyther in the Sunne or in the smoake, for otherwise the sēde will rot and perish. They will long be preserved, and continue fresh, if after they be gathered, they be put into a close vessell with the Lees of white wine, or hanged in a vessell of Vinegar, so that they touch not the Wine.

Next these I place the Hartchock, or Artichock. It is a kinde of Whiskell, by the diligence of the Gardener, brought to be a good Garden Pearbe, and in great estimation at Noblemens tables: it is as you see, framed with a round prickly head, having a great sort of Plakes set in order steeplewise. The Latines call it Scrobulum, because the fruit of it something resembles the Pineapple. The Frenchmen call it Alicocalum of the Arabicke article Al, and Cocalos a Pineapple, whereof it is corruptly called Anichaul, in Italian and Spanish Cardo, in Dutch, sometime by the French name, sometime Syobrin. It is called of Columella Cinara, because in his growing, he chiefly delighteth in Ashes. The sēd is best sown in March, and the sets in November: if you will have it yeld fruit in the Spring, you must bestow much ashes upon it: it will hardly beate the first yeere that it is sown. Beware that you set not the sēde with the wrong end upward, for so shall your Artichock prove very little and evill savoured: It loveth good ground and trell dūged, and prospereth best in fat ground. Palladius would have you moreover, to set the sēdes in well ordered beds, in the increase of the Moone, halfe a foot a sūder,


 Artichock.

sunder, and not deepe, but taking them in three of your fingers, thrust them downe, till the earth come to the first ioynts of your fingers, then cower them tenderly, and water them often, specially toward Winter, so shall you haue the bigger fruit. When they grow up, they must be continually weeded and dunged, as I said, with ashes. They say, they will lose their prickles, if the tops of the seeds be made blunt upon a stone before they be set: and sweet they will be, if the seeds be laid in Milke. You must keepe them from Hoboles and Mice, with Cats or faine Vessels, as Ruellius teacheth you. Athenzus calleth the stalks of the Artichoke *epithoron*, that lieth upon the ground, and that which standeth upright, *traphaca*. It may be sowne in February or March the sowne increasing, the seeds must not be sowne together, but set one by one as aforesaid, yet if you can procure them, I rather wish you to set them from slippes or young plants then sow them from seed, for they doe so naturally love the earth, that you can hardly slippe so waste a lease as will not take roote: if you sow them from the seed, you must bee sure to water them after their first springing, for so the fruit will be much larger and better.

THE 3<sup>rd</sup>. Well, what herbe is yondar same that cometh up as it were haire, with a blewish flower and pale, having in the midst of the bell, as it were, drie yellow tongues.

Saffron.

MARIVS. It is Saffron, in Greeke *ephaon*, in Latine *Crocus*, in Italian and French, so in Spanish *Acafran*.

THE 4<sup>th</sup>. What neede we care any more for eyther Coricum, Sicill, or Cyren, from whence we fetch it with so great charges?

MARIVS. Yea, there groweth great plentie of it in Germanie about Spire, and divers other places, which may compare in goodnesse with any other place. It is set in March, of the head that it hath round, and in Cloves as the Yellie, the Wieke, and the Sea Onion. Constantine affirmeth, that it may be set of the roote, as soone as the flower is off. The rootes of the heads doe so encrease under the ground, that of one of them some yere springeth eight or nine others. In many places they are removed every seventh or eighth yere into better ground,



ground, whereby they come againe to be as good as at the first. In the Countreys lying about the Rhine, they plucke them up every third yere, and lay them a drying in the Sunne till August, and then poling off the cuterskin, they set them againe halfe a foote one from the other: the best heads are those that are fattest, & have little haire, the worst looke rottenly and ill favouredly, and have an ill savour: It delighteth to grow by high wayes and nare springs, and to be troad and trampled on, prospering as it were by oppression: it groweth greene all the Winter, it is gathered in Autumne, when it is come to his colour, by plucking out the little yellow tongues from the bell, which are afterwarde dried three or foure daies together, and well picked and purged, and so made up in Reces: some thinke it best to dry it in the shadow. It is craftily counterfeited by the Apothecaries, braying it in red wine, which they besmeare, adding thereto the sum of silver or lead to encrease the weight, the craft is perceived by the dustinesse thereof, and by the savour of the red wine. The proofe of the good is, if it crackle betwene the hands as a brittle thing, which the counterfeit doth not, or if in putting it to your mouth, it cause your eyes to water. Wherefore, the best is that which is new, and hath a pleasant smell, in colour like to Gold, and dieth the fingers in touching it. In March you must purge the ground where it groweth, and whether ye plucke it up or not, notwithstanding. other hearbes may very well grow there untill August: Pursleine, Parsley, or such like hearbes doe best grow there. And when the Saffron beginneth to flower, you must rid away the other hearbs: for in the best time about September or October it flowereth.

Of the ordering of *Rosemarie*: I will speake a little. *Rosemarie* are which I suppose it to be the same which the Greeks call, *2. CAROTIS*, because it savoureth like Frankincense, in Latine it is called *Rosmarinus*, and in all other tongues it keepeth the name, it serveth both for pleasure and profit: Theophrastus maketh two kinds of it, a barren, and a fruitful, and a sort of small slips in Aprill: it is set set by women for their pleasure, to grow in sundry proportions, as in the fashion of a Cart, a Perceke, or such like thing as they fanlie. It delighteth in Rie or rough ground, and in the tops of the sward enclosed in little

little huskes white and round. It flowreth twise a yere, in the Spring, and in the end of Summer: it is gathered from May till September, and it is good to plucke off the flowre often; that it may not flowre too much. In the higher parts of France it groweth wilde in such plentie, that they use almost no other feuell: it is in cold Countreies in Winter set in Cellers and hot houses, and is brought againe in the Spring into the Garden. But here you must beware, that when you first bring it out, you keepe it from the March Sunne, setting it in the shade, acquainting it by little and little with the ayre: some use to house it with straw and Horse-dung, and so leave it in the Garden. Sage, in Latine Salvia, and like in other Languages, is an Herbe common in every Garden: it is planted both of the seede, and of the slip, in March, in any kinde of ground, it maketh no matter where: the gardeners use to lay bucking ashes about it, whereby it prospereth the better. Next to Sage, is Mint, in Latine Mentha, in Dutch Myntz, in Italian and French, after the Latine, in Spanish Yerva buena: it is planted and bred in all things as Sage is: it prospereth both in dry and wet grounds, and groweth well by waters. If you lacke seedes, you may take the seede of the wilde Mint, and set them with the tops downeward, whereby they shall leave their ranknesse: and being once sowne or set, groweth every yere. Pimpernell, in Latine Pimpinella, is used both in the Kitchen, and in Physicke: and being once sowne, groweth every yere, both in sunnie places and in shadow: it groweth in most places wilde. Hyssop, in Latine Hyssopus, and so called in most Tongues in Europe: a common Herbe, knowne to every Gardener: it beareth, though no sunnie ground, yet good and rich ground, it is planted both of the seed, and of the slippe: when it hath once taken root, it careth not for the sharpnesse of winter: Savorie, in Latine Saurcia, or, as Columella saith, Cuaila, in Italian Coniella, Savoreggia, Thymbre, in French, Savoreie, in Dutch Kinkelzwilbelisop, groweth in baraine places, and is set and sowed as the plants before. The next is that which commonly is called Basyll, in Latine Ocimum, in French, Italian, and Dutch, Basilica: an herbe that is used to be set in the midst of knots, and in windows, for the excellent savour that

Sage.

Mints.

Pimpernell.

Hyssop.

Savorie.

Basyll.

It hath: it is also good for the pot: it is sowed in March and Aprill, and delighteth in sunny ground, you must put two seedes fill together. Basil is best watered at noone, whereas all other hearbs are to be watered in the morning and in the evening, it may be removed in May. Theophrastus saith, that it prospereth best, when it is sowed with cuses. Marjorum, in Latine Amasracus, and Maiorana, is also in like sort used: the Dutch and the Italians call it after the Latine, the Spaniards Amorcedux, the French. Mariolaie and Thyn, in Græke of Dioscorides and Paulus Aegineta *συμυτοικον*: this also for the pleasant savour it hath is set in pots and in Gardens: it is sowed in March three or foure seedes together, and halfe a foote a sunder, in May when it groweth to some height as Basell, it is removed. Time, next of kindred to these, in French, Italian, and Dutch like the Latine, in Spanishe Tomillo, delighteth in stonie, light, and sunnie ground: it springeth of the seedes and of the slippe, and also of the flowre, as Theophrastus saith. These three tender and delicate Hearbes are to be sowed with great heed, either in earthen pots, or in Garden beds. Hitherto have I described unto you such Hearbs as serve for the Kitchin: and because the later sort are also esteemed for the savours, I will goe forward with the description of the rest that are set in Gardens for the pleasure of them, and for the savour doe garnish the said Gardens, and serve also for other purposes. Of Rosemarie I spake before, I will now procede with these that grow before my feet. Lavender called in Latine Lavanda, or Lavendula, that groweth in borders about the beds, and keepeth the Latine name in other tongues, both grow in wilde places and stonie: it is set of the slips, and removed: it groweth to spike in June, and in July is gathered & tyed in bundles for the savoure: it is distilled for sweet waters. Flowre-gentle, in Latine Amaranthus, though it have no savour at all: yet hath it a delightfull beantie to the eye: the Frenchmen, for the fairenesse of the colours, excellling both Crimson and Purple in graine, doe call it Passeveleurs, the Italians Fiorveluto, because it contendeth in colour with Crimson in graine: it loveth to be often gathered and plucked, whereby it springeth the better: the flowres after they be dead, with a little water come againe.

again to their colour: it is called *Amaranthus*, because it dyeth not.

Lavender.  
cotten.

Myrtell.

Lavender-cotten; some call it *Santonio*, and female *Southern* wood, in Dutch it is called *Cypresen*, in French *Cyprez*: it groweth commonly in Gardens, springing every yeere. Myrtell, in Latine *Myrtus*, in Italian *Myrto*, in Spanish *Arabian*, in French *Meurte*, in Dutch *Welscheidelber*, the leaves are not much unlike the leaves of the Olive tree, something smaller, with slender branches and leaves growing in order one by another, as you see, with black berries, and leaved like the Pomegranate. It groweth alwayes greene: it is set and sowed both of the seede and slippe, and the stocke: but you must still raise up the earth about it: till it be thoroughly rooted. Some sow the berries being a little beaten, and covered in Furrowes of earth: it delighteth in continuall weeding: so groweth it to a handsome height, meete to shadowe Heards: it loveth to be watered with the Urine of men, or of Sheepe. This onely is to be wondred at, that of the liquor thereof alone, may be made all sorts of Wine and Dyle: Cato teacheth to make Wine of the berries, being dyled, and put in water and hong sodden together: if they be not dyled, they come to Dyle: how the wine of them is made, Dioscorides sufficiently declareth: Plinie reporteth that Cato made three sorts of Myrtells, white, blacke, and a third kind, that he calleth *Conjugale*: it delighteth to grow by the Sea bankes, as Servius saith, it groweth at this day commonly in Italy, along by the Sea coasts.

I may not in this place forget Anise, whose seed is so pretious and medicinable, it is hot and dry, it dissolueth humors and obstructions, and is very comfortable for weak stomachs, it delighteth in good and loose mould, and is to be sowne in the height of the Spring onely.

Nert this I place *Organie*, which is also hot and dry, and excellent against any sicknesse of the Liver; the ground in which it most sogeth, would be a little stonie and full of Rubbish, yet by no meanes undunged: the season fittest for the sowing of it is March and September, the moone being in Libra or any other moist signe; it must be continually watered till it appeare above the earth but after sojournes, sojournes being once well fixed it is ever certaine.

Which

White Popple is Colde, and moist, and much probokes the  
Splee, it would be solone in a rich warme ground in the mo-  
nethes of March, September and November: 3 251. 2 6 789

Germander is hot & dry and excellent against the Bings-bill, Obstructions of the Spene, and hardnesse of urine. It is an harde herbe and will prosper in any ground, it is to be sowne either in the Spring or fall of the lease, but if you set the slippe it flourisheth the better, and it is most comely for the setting forth of knots in Gardens.

Galatian is hot and dry, and preventeth infection, it helpeth Ritches and other griefes proceeding from windy causes, it loveth to grow in moist and low places, the ground being well manured, and till it be sotted at least an handfull high, it must be kept with continual watering; The moiftest time in the yeere is the best to sow it in.

Pepperwort is hot and dry, yet of the too much more hot, it is good against all kinde of Aches and other paine in the joints, or Sineus; It delighteth in a rich blacke Soyle, fat and loose, it would be sowne in Februarie, and removed in September.

Philipendula is very hot and drie, and is good against abortiue Birthes, Stone, Strangury, or any greefe proceeding from cold causes; it may be sowe in any barren, stonie or gravelly soyle, in the monethes of May, April or September; it neither desireth much weeding nor much watering, but being once committed to the ground appeareth suddenly.

Lastly, and which is not inferiour, but rather superiour to any before going, I place the blessed Thistle, which the Italians call Cardus-Benedictus, it is hot and dry and very soberaigne against most inward sicknesses, especiall febers and infections: it stauncheth bloud, and is a great comforter of the bwayne, it delighteth in a rich ground and a loose well tempered mould, it must be sowne very shallow and not covered above two inches deepe; the first quarter of the moone is the best time to sow it in, and in the moneths of March, May or September; if you sow a litle fine flaxen Tulle with it, most assuredly it will prosper much better.

**T. H. R. A.** Oh what fun and gaily. Geliflowers are here! Geliflowers,  
You

You may truly say, that Salomon in all his Princely pompe, was never able to obtaine to this beauty: some of them glister with a perfect Crimson dye, some with a deepe Purple, and some with a passing beautifull Carnation: A marvaile the old wilters knew nothing of these in their time.

MARIVS. There are some that suppose it to be a kinde of Garden Betonie, which the Gardener seitching out of the field, and thrusting Cloves into the roses of them, with diligent planting, have brought to this excellency: others thinke it to be called Yconica of the Spaniards, who first found it. Some thinke it to be Oenanthe, because it floweth with the Wine: it delighteth in warme sunnie ground: it is sowed seldom of seede, but commonly set of the slips, as I said of Rosemary. The Gardners in the end of Summer, doe take the rootes and set them in Pans, Pots, or Pailles, and when the frosts come, they carry them into their Cellers, and in sayre warme dayes bring them abroad againe, and suffer them to be now & then watered with the raine. It hath bene often sene, that in such hantie cellers they have flowered all the winter long, through warmenesse of the place: some set boughs about them, and cover them with straw and horse-dung, to preserve them against the cold: it often happeneth that one roote beareth one pale white flower and red, and the third speckled or Carnation.

Thus much for the opinions of the Ancients; but because the English are at this day the onely excellent Masters of this most excellent flower, I will therefore rely onely upon their opinions; and they affirme that Gilliflowres are of others kinds; some single as Pinks, Wall-gilliflowres, and all sorts of Gilliflowres that are sowne from the seede; some double as the Carnation, the Stammell, the Clove-gilliflower, the Dower, the Granada, the Queenes-gilliflower, the Banellet, the Christalline, and a world of others, which are of all other flowers most sweete and delicate. All but the Wall-gilliflower love good fertile earths, and may be sowne either in March, July, or August, they are better to be planted of slips than sowne: yet both will prosper. They are very tender, and the roote so pleasant that the worms will destroy them, and thence it cometh, that they plant them in earthen pots and halfe-tubbs, which at  
pote



your pleasure you may remove from the sunne to the Shade, and from the roughness of stormes to places of shelter: they grow up high on long slender stalkes, which you must defend and support with quate crables made of splinted wood, least the winde and the waight of the flowers breake them. The white Gylliflowres you may make of any colour you please, as if you would have them of a purple colour, then they lay the seedes in kepe in the lees of red wine, and after their sowing, water them with the same lees; if you will have them of a scarlet red, you shall put Mercurilion betwene the rinde and the small beads growing about the rute; if you would have them blew, you shall dissolve Azure or Blüe betwene the rinde and the head; if yellow, then dissolve Ympment, if Greene, dissolve Mercuri greasie; and thus of other colours. Now if it please you to have them of mixt colours, you may also by grafting of contrary colours one into another, attaine your desire, and you may with as great ease graft the Gylliflowre as any flower whatsoever, by ioyning the knots one into another or twisting the rutes one into another, and then wrapping them about with a little soft, flaved silke of the same colour you would have the Gylliflowre, and covering the place close with a little soft red waire well tempered; and you shall understand that the grafting of Gylliflowres, maketh them exceeding great, double and most orient of colour. Now if you will have your Gylliflowers of dyvers odoriferous smells, you may doe it in this manner, take two or three great Cloues and kepe them some and thentie houres in damaske rose water, then take them out and bruse them, and put them into a fine cambricke ragge, and so bind them about the root of the Gylliflowre nere to the setting on of the stalke, and so plant it in a fine soft and fertill mould, and water it with the rose water wherein the Cloues were steeped, and the flower which springeth from the same will have so delicate a mixt smell of the clove and the Rosewater, that it will breede both delight and wonder, If in the same manner you take a stick of Cinamon and steepe it in Rosewater, and then bruse it and bind it as aforesaid, all the flowers will smell strangely of Cinamon. If you take two or three graines of Muske, and mixt it with three or foure



dropes of Damaske rose water, and binde it as aforesaid: the flowers will smell strongly of Ruske, yet not too hot or offensive by reason of the correction of the Rose water; and in this sort you may doe with Ambergrise, with Benjamin, with Storax or any other swate dragges whatsoeuer. And if in any of these confections before named, you keepe the seedes of your Gilliflowres, foure and twentie howres before you sow them, they will take the same smells in which you keepe them, onely they will not be so large or double as those which are replanted or grafted.

Of the Wall-  
gilliflower.

Now for your Wallgilliflower, it delighteth in hard Rubbish, lime and stonie ground, whence it cometh that they covet most to grow upon walles, Pavements and such like barraine places; it may be sowne in any moneth or season, for it is a seede of that hardnesse, that it makes no difference betwixt Summer and Winter, but will flourish in both equally and beareth his flowers all the yere: whence it comes that the husbandman preferres it most in his Back-garden, for it is wondrous swate and affordeth much home: It would be sowne in verie small quantitie, for after it have once taken roote, it will naturally of it selfe streiched much ground, and hardly ever after be rooted out: It is of it selfe of so exceeding a strong smell and so sweet, that it cannot be forced to take any other, and therefore is ever preferred in its owne nature.

To preserve  
Gilliflow-  
res.

For the preservation and increase of all other Gillyflowers (before spoken of) which are of a tender and curious nature, and because the seede at no time bringeth forth more than a single stinke, therefore it is good that you observe both in the Spring, and at the fall of the leafe, or at any other time when the flower is crept in its branches, to dip so many as conveniently you can without hurt, and plant them in a bed digged for the purpose in some shady place where the sunne cometh as little as may be, and plant them as thicke and close together as may be, for they will preserve one another. Those which you have planted in the fall of the leafe, you may remove at the spring and plant them

them in your knots, Borders or any other other perspicuous place, and those you planted in the spring you may remove at the fall, and if any of your elder rootes dye or decay as the Sunne is wonderous perillous unto them, then you may at any time from this Roze of young Impes supplie the place, and keepe your Garden ever flourishing.

The Heliotropion or flowers of the Sunne is in nature and colour like other English Marigolds, wherby it is exceeding huge in compasse, for many of them will be twentie and foure and twentie inches in compasse, according to the fertillnesse of the Soyle in which they grow, and the oft replanting of their rootes, they are exceeding goodly to looke on, and pleasant to smell: they open their blowes at the rising of the Sunne, and close them againe at the Sunne setting: it delighteth in any soyle that is fertile eyther by arte or nature, and may be sowne in any Moneth from Februarie till September.

The oft planting and replanting of the root after it is sprung a handfull from the root, maketh it grow to the uttermost bignesse: it would have the East and West open upon it, onely some small penthouse to keepe the sharpnesse of the winde from it.

THRA. Lo, ponder are Roses growing in Borders, and made in a maze: doe they grow of the side, or of the set?

MARIUS. Roses, called in Latine Rosa; and in all other languages as in Latine, are diversly planted, sometime of the rootes, sometime of the branches, being cut in small sets, and planted a foote asunder. Some wreath them in Garlandes, and so set them to have them smell the pleasanter. The use of sowing of them is best: howbeit, they will very well grow of the side, though it be long ere they spring, and therefore they set them of sets a foote in length; it neither delighteth in rich or moist ground, but is well contented to grow amongst rubbish, and under walles. The places whete they must grow must be digged deeper than Come ground, and not so deepe as the Vineyard: the Rose is rather a Thorne then a plant,

And groweth upon the very bryambles : it cometh first out in a little budde and long sharpe beard, which after they be opened, it discloseth it selfe and spreadeth abroad, with a yellow beary taske in the midst. Pliny maketh mention of sundry sorts of them : one sort he calleth Milesia, having an Orient and fiery colour, another Alabandica, with white leaves, and Spermonia, the basest sort of all : the Damaske and the White, are used for sweets, waters : they differ in roughnes, prickles, colour and smell. There are that have but only five leaves, & others with an hundred leaves, neither good in beauty, nor in smell : the roughnes of the rinde (as Pliny sayth) is a signe of the savour. There are some little pale ones, called Carnation and Pincars, these do wonderfully grow where they once are planted, and have a most excellent savour. Roses are used to be set in February, which is either done with the seed, or the set planted in little furrowes. The seedes (as Palladius sayth) are not the little yellow things in the midst of the Rose, but the graines that growes within the red riped Berry : the ripenes whereof is deemed by the swarthinesse and the softnesse of the berry : where they once are planted, they continue long, and after they be, they send out new buds and springs. If you lacke sets, and would of a few have a great number, take the branches that begin as it were, to shew their buds, and cutting them in sundry sets, foure or five fingers in length, set them in good ground well dunged and watered : and when they be of a yeres growth, take them up, and set them a fote asunder, proine them and trimme them with often digging about them. Roses must still be cut, for the more you cut them, the thicker and the doubler they grow, otherwise they will ware single and wilde, it will also doe them good sometime to burne them : being removed, it springeth very soone and well, being set of sets foure fingers long and more, after the setting of the seauen starres, and after removed in a Westerly winde, & set a fote asunder, and often digged. The old Roseys must have the earth loosed about them in February, and the dead twigges cut off, and where they beare thinne, they must be repayed with the young springs. To have Roses of fine sundry colours upon one roote, make when

Muske  
Rosa.

When they begin to burgeon, a fine hole beneath in the stocke under the ioynr, and fill it with red colour made of Brasell sod in water, and thrust it in with a cloath, and in the like sort put in to another part of the stocke graine colour, & in another yellow, and what other colours you will, and cover the holes well with Ore dounge and Lome, or very good earth. If you will have your Roses beare betimes, make a little trench of two hand-bredths round about it, and potize in hot water twice a day, and thus doing, (as Democritus promisseth) you shall have Roses in January. You may preserve Roses before they open, if making a slit in a Ræde, you enclose the blossome, & when you would have fresh Roses, take them out of the Rædes: others put them in Earthen Pots close covered, and set them abroad: the Roses continue alwayes fresh that are dipt in the Dregges of Oyle. If you will have them at all times, you must set them every moneth, and dung them, and so (as Didymus sayth) you shall have them continually. To cause them, or any other flowers to grow double, put two or three of the seedes in a Wheat straw, & so lay them in the ground. If you set Garlicke by your Roses, they will be the sweeter: the drier the ground is where they grow, the sweeter they will be, as it appeareth by the season of the yere, for some yeres they are sweeter then others: the Rose will be white, that is smoaked with Brimstone, when it beginneth to open: amongst all Roses, those are most to be commended, that they call Carnations and Provincials. The Oyle of Roses was greatly had in estimation even in Homer his time, and at this day the Vinegar of Roses is greatly used. Next unto the Rose in worthinesse, for his savor and beautifull whitenesse is the Lilly. The Crækes hold opinion: that it sprang first of Iunos Milke sprinkled upon the ground. In February we begin to set Lillies, or if they grew before, to lose the earth about them with a rake, taking good hæde that the young tender shotes about the roote be not hurt, nor the little head, which taken from the old roote, be set for new Lillies. As the Roses are, so are the Lillies, the sweeter, the drier the ground is where they grow: Lillies and Roses being once set, continue both very long.

Lillies.

There are red Lillies made so by Art, for they take the skalkes and rootes of the Lillie, and hang them in the smoake till they wither, and when the knots begin to uncover, they are layd in March in the Lees of red wine, till they be covered, and then set in the ground, with the Lees powdered about them, so will they come to be purple; and inwaide as you alter the colour of the Gillsflower, so you may change the complexion of any Lilly.

Violens.

There are sundry sorts of Violets, both of kinde and colour, but the ordering of them is in a manner all one.

Bearefoote  
or Setter-  
wort.

Next I place Bearefoote or Setterwort, and there are two kindes of it, the blacke and the white. The roote of the Bearefoote they thrust through the eare, or into the breast of the beaſt, that is either diseased in his lungs, or hath the Purren. Colamel-la ſaſmeth to call it Conſigillo: it groweth not in Gardens, except it be ſowed, it continueth long, and loveth cold and woody ground.

Angelica.

There ſtandes, not farre from that, another very noble hearbe in Phiſicke called Angelica. His roote, becauſe it is a ſoveraigne remeedy againſt the plague, and hath divers other good operations, it is cheriſhed in our Gardens, and being once ſowed, it cometh up every yere: it groweth alſo wilde in the mountaine Countrey, and ſtoweth in July and Auguſt. Here is alſo Helicampana, this alſo is ſet in our Gardens for medicines ſake, and we make much of it for the roote, it groweth wilde in the hilly Countreies, and by ſhadowy places. In Summer the roote is taken out of the ground, and cut in ſmall pieces, and ſodried: at this day it is called Enula campana: it hath a yellow ſtowre, a leafe like Bullin, but white and hoarie at the one ſide.

Helicam-  
pana.

Worme-  
wood.

Wormewood, though it grow in every place, yet this that you ſee here is Romane or Spaniſhe Wormewood; this kinde is ſet in our Gardens, and thought to be the beſt. Savine which we have here alſo in our Gardens, for divers diseases of Cattell, hath leaues like Juniper or Cypres, alwayes greene, there are two kindes of it, one like the Tamariske, the other like Cypres: it is a buſh rather ſpreading in breadth, then growing in height: the Berries which he beareth, may be gathered in the end of Summer, or at any other time.

Savine.

Here

Here is also Valerian which is hot and drie, and preventeth infection, it helpeth Stitches and other graces proceeding from win. die causes, it lovethe to grow in moist and low places, (the ground being well mannured,) and till it be shot at least an handfull high, it must be kept with continuall watering; the moisteest time in the yere is the best to sow it in.

This quarter I keepe for outlandish flowers, which although they are more for beauty and glorie then use or smell, yet are they such an oznamment to the garden, and so pleasing to the eye besides the raritie and strangeness, that the Garden is held imperfect which is deprived of them, the number of them is like their colours hardly to be numbred, therefore I will trouble your eares but with the rehearsall of some few of the most principall which I account the Croone-emperiall, the worthiest of all flowers both foraine and homebred, it is the delicatest and strangest; It hath the shape of an emperiall Croone and will be of divers colours according to the art of the Gardener, in the midst of the flower you shall see a round pearle stand, in proportion, colour and Orientnesse like a blew naturall pearle, onely it is of a soft liquid substance. This pearle if you shake the flower never so violently will not fall off, neither if you let it continue never so long, will it eyther increase or diminish in the bignesse, but remaineth all one, yet if with your finger, you take and wipe it away, in lesse then an houre after you shall have another arise in the same place and of the same bignesse; this pearle if you tast it upon your tongue, is pleasant & sweet like honie; This flower when the Sunn ariseth you shall see it looke directly to the East, with the stalks bondselow therunto, and as the Sunne ariseth higher and higher, so the flower will likewise arise, and when the Sunne is come into the Meridian or Poone point which is directly over it, then will it stand upright upon the stalk and looke directly upward, and as the Sunne declineth so will it likewise decline, and at the Sun setting looke directly to the West onely. The seedes of this flower are very tender, and therefore would be carefully sowne in a very rich and fertill Earth, well broken and mannured. The seasons most meete for the same is the latter end of March, April, or May, for the flowers flourish most in May, June and



July. As soone as it is sprung an handfull above the earth, you shall reem vbe it into a screech mould, and that will make it flourish the braver: The roote of this flower is like an Apple, or great flat Onion, and therefore in the replanting of it you must be carefull to make an hole large and fit so; the same, and to fix the mould gently and close about the same: In the winter it shrinketh into the earth, and is not at all to bee discerned, by means whereof I have seen divers (supposing it to be dead) to digge up the earth, and negligently spoyle the roote; but bee not you of that opinion, and in the Spring you shall see it arise and flourish bravely.

The Dulippo,  
lippo,

Pert to this I place the Dulippo or Tulippo, which is but a little shoot of the Crowne-Emperiall in pleasantnesse, beauty, and rarenesse, for you may have them of all colours whatsoever, in such sort as was shewed you for the Gillyflowers, Lillies, and other rotes; they are tender at the first, springing from the seede, and therefore must be sowne in a fine rich mould in the warmth of the Sunne, either in March, Aprill, or May; but after they are once sprung above the ground, they are reasonable hard, and will defend themselves against most weathers. The roote of this flower is shaped like a Pearce, with the biggest end downward, and many small thyrs at the bottome, therefore you must be sure when you reem vbe or replant it, to cover all the roote in fresh mould, and let not any part of the white thereof be uncovered. This flower by monethly replanting, you may have to flourish in all the Spring and Summer Monethes in the place; for in the dead of winter it shrinketh into the ground, and is not at all to be perceived. The stalks of these flowers are weakke, therefore to support and defend them from the shakings of the winds, you must make little cradles of small sticks in such wise as you did for the Gillyflowers.

The Narcissus.

The Narcissus is a very curious & dainty flower, and through his many variety & alteration in growing, they are supposed to be of others kinds, but it is not so, for in as much as they are seene to be of divers colours, that is but the Art of the Gardener, as is before exprest in other flowers; & whereas some grow single, some double, & some double upon double, you shal understand that such as grow single, grow simply from the seede onely those which



which are double & no more, are such as have bene planted and replanted, the small threds of the rootes being clipt away, & nothing being left about it that is superfluous; & those which are double upon double, are the double plants grafted one into another. This flower loveth a rich warme soyle, the mould being easie and light: It may be sowne in any Month of the Spring, & will flourish all the Summer after: Before it appeare aboue ground, it would be oft watered, but after it shews not how little, for it will defend it selfe sufficiently. Not unlike unto this are your Daffadills of all kinds and colours, & in the same earths & seasons delighteth either to be sowne or planted, & will in the same manner double and redouble his leaves. Many other foreign & strange flowers there are, but the order of their planting differeth nothing from these which I have already declared, being the most tender and curious of all other: onely I will advise every skillfull Gardener, that when he shall receive any seed from any foraine Nation, to learne as neere as he can the nature of the soyle from whence it cometh, as hot, moyt, cold, or dry; and then comparing it with his owne, sowe it as neere as he can in the earth & in the seasons that are next to the soyle from whence it came, as thus for example. If it came from a clyme much hotter than his owne, then to sow it in a sandy mould or other mould made warme by the strength of Manure, in the warmest time of the day, & in those Months of the Spring which are warmest, as Aprill or May: you shall let it have the Sunne freely all the day, & at night with matts, penthouse, or other defence, shield it from sharpe winds, frosts, and cold dewes.

An excellent advise.

I have seene diverse Noblemen, & Gentlemen (which have bene very curious in these dainty flowers) that have made large frames of wood, with boards of twenty inches deepe, standing upon little round wheeles of wood, which being made long, square, or round, according to the Masters fancy: they have filled with choyce earth, such as is most proper to the flower they would have grow, and then in them sowe their seeds or fire their plants, in such sort as hath bene before described, and so placing them in such open places of the Garden, where they may have the strength and violence of the Sunne

A new manner of planting and transporting flowers and fruits.

Shinne all the day, and the comfort of such moderate shouers as fall without violence or extraordinary beating, and at Night draw them into some low vaulted Gallerie toyning upon the Garden, where they may stand warme and safe from stormes, windes, frosts, delues, blastings, and other mischeiues which euer happen in the Sunnes absence. And in this manner you may not onely have all sorts of daintie sovraine flowres, but also all sorts of the most delicatest fruites that may be, as the Orange, Lemon, Pomegranate, Citheran, Cinamon, Allmond, Myue, or any other from what climate soeuer it be deriued, obseruing onely but to make your frames of woode (which contains your earth) deeper and larger, according to the fruitte you plant in it, and that your Alieyes through which you draw your Trees when you house them, be smooth and leuell, least being rough and uneven, you fogge and shake the rootes with the waight of the trees which is dangerous.

Also in these frames of woode I have knowne whole Gardens of fruites and flowres conuayed beyond the Seas, as from England into Denmarke, from Italy and Fraunce into England, and so to other Nations.

Now for such flowres or fruites as shall be brought from a colder or more barrains ground then your one, there needeth not much curiositie in the planting of them, because a better euer bringeth fourth a better increase; onely I would wish you to obserue to giue all such fruites and flower the uttermost libertie of the weather, and rather to adde coolnesse, by shadow, then increase any warmth by reflection, as also to augment shouers by artificiall watrings, rather then to let the roote drye for want of continuall moisture.

**THAR.** But many times we see Gardens be destroyed with wormes and vermine, what remedy have you for this?

**MARIVS.** Of the faults of the ground, and the remedy thereof, as the amending of either too much moisture or drynesse: I spake in the beginning, touching wormes, flies, and other vermine that annoy the Gardens, which for the most part are these, Caterpillers, Snayles, Moles, Pice, Gnats, and Antes. There are that say, that if you mingle with your  
sædes

seedes sots, or the Juice of Houselêke, or Singrün, the Caterpillers will not meddle with the herbe that springeth of such seede: and that they will doe no harme to your Trees, if you sprinkle them with the water wherein the ashes of Vines hath bene laid: moreover the stalkes of Garlick made in bundles, and burnt in Orchards or Gardens, destroyeth the Caterpillers. They will not breed (as they say) if you burne about the rootes of your herbs or Trees, quicke brimstone and lime: the same they report of Lie made of the figtree. Ants will not annoy your corne or hearbs, if you encompasse it round with Chalke, or put into their hills, the ashes of burnt Snailles, and if some of them be taken & burnt, the rest will not come nere the sabour: if *Asa foetida* be laid in Oyle, and poyzed upon their hills, it utterly destroyeth them; they will not touch the trees nor the hearbs, if you annoynt the stalkes with bitter Lupines, or lime laid with oyle. You must shake off the Caterpillers in the morning, or late in the evening when they be numbed: also water wherein Dill hath bene sodden, cast about the Orchard when it is colde, destroyeth them. It is written, that if you set Chiches about your Garden, Caterpillers will not breed, and if they be already bred, you must seach the juice of Wormewood, and cast among them. The dung of Bullocks burnt upon the coales, destroyeth Gnats: the lime also doth brimstone: a sponge wet with vinegar and hanged up, draweth also swarines of Gnats unto it: also the maw of a Sheepe new killed, not washed nor made cleane, if it be laid in the place where Moths, or other such vermine doe use, and covered a little the upper part, you shall after two dayes finde all the noysome vermine crept into it: thus must you doe twise or thrise, till you thinke you have destroyed them all. Of killing and drying away Moles, Sotion the Greeks writeth, that you must take a Put, or any like fruit, & making it hollow within, fill it up with Chasse, Rozen, and Brimstone: afterward stoppe the vent holes that the Mole hath in every place, that the smoake breake not out, onely leaving one open, where you shall lay the Put, in such sort as it may receive the winde on the backe part, that may drive the smoake into the Moles: there are also traps to be made, for the destroying of Moles: a

Against  
Caterpillars

Gnats.

Moles.

frame

frame is to be set upon the new Hills, with a peece of wood so hollow and framed, that it may receive (as it were in a Sheath) another peece of wood made in fashion like a Knife, to this is ioyned another little sticke that lieth in the hole, and is fastned to a Catch without, that as soone as the Pole toucheth the sticke within, the is taken presently, as it were, with a payre of Sheares. Wile are taken, if y<sup>e</sup> potyre into a platter, the thickest mother of Dyle, and set in the house a night, as many as come at it are taken: also the roote of Bearefoot mingled with Cheese, Bread, stowe, or grease, killeth them. Earthe and very sharpe Vinegar mingled with the iuice of Penbane, and sprinkled upon the Hearbes; killeth the Fleas, or little blacke wormes that be in them. No kinde of vermine will annoy your Hearbes, if you take a good sort of Cresshes, and cast them in an earthen vessel with water, suffering them to worke abroad in the Sunne for the space of ten dayes, and after with their liquour sprinkle your Hearbes. Next these or rather greater then any before going, is the offence of Thunder and lighting which in a Moment killeth all sorts of flowers, plants, and Trees even in the height of their pride and flourishing, which to prevent it hath bene the practise of all the ancient Gardiners to plant against the wals of their Gardens, or in the midst of their Quarters where their choyest flowers grow, the Laurell or Bay tree which is ever held a defence against those strikings.

Mise,

Garden  
Flies,Thunder  
and light-  
ning,Toades and  
frogs,

Next I place Toades and froggs, which are exceeding poisonous and great destroyers of young plants, chieflie in their first appearing above the ground; and the ancient Gardiners have used to destroy them by burning the fat of a Stagge in some part of the Garden Beds, from which Earth all creatures that have poison in them will flee with all violence; other Gardiners will watch where the Toad pear cheth on nights, and gathering up her dung scatter it upon the bedds eyther simple, or mixt with the shavings of an old Harts hozne, and no venomous thing will come nere it.

The Greene  
Fly.

The Greene Flye of all flies is held the worst, and is most greedy to hurt Herbes and plants, therefore to destroy him take Penbane leaves, Houselocke and Hints, and beat them in a Mortar

Poster, then straine forth the iuyce and adde thereto as much Vinegar as was of all the rest, and therewith sprinkle your Beds all over, and the Crane flie will never come nere them. Some hold opinion, that if you plant the hearbe Alet in your Garden, that it is a safe preservative against these Greene flies; for it is most certaine th. at the very smell thereof will kill these and most sorts of all other flies whatsoever, as hath bene found by approved experience and the sayes of old ancient Ably Gardens, which a man shall seloome finde without this hearbe planted in them.

Flouthes or Floughs are very pernicious in a Garden, for Mothes, they destroy both seedes and plants, and there is no better or more certaine way to kill them, then by taking ould horse hooves and burning them, with the smoake thereof to perfume all the places, where they abide, & it will in an Instant kill them.

Cankers are a kind of filthie wormes which devourerh both the great and small leaves of all sorts of swete plants, especially Lettuce, Cabbage, Coleflowes and such like, and the way to destroy them is to scatter amongst your plants Cow dung, or to sprinkle the iuyce thereof with a wispe of Rue over all the beddes: and though some with a rustie knife, use to scrape them from the leaves, and so kill them on a tileheard, yet for my part I hold this the nurer way, and both more certaine and more easie. Thus I have shewed you the persection of my Garden which was persected with much labour, longer expeince of time and not a little cost, I will now deliver you a little tract on Method how for the entertainment of any great person in any park or other place of pleasure, to make a compleat Garden in two or three dayes.

THAR. God dir provide.

MARIVS. If you shall entertaine any noble personage to whome you would give the delight of al strange contentment either in park or other remote place of pleasure, nere unto Bonda river or other waters of clearenes, after you have made Arbours & Summer Bowes to feast in, the fashion whereof is so comon that every laborer can make them, you shal then make out your Garden plot, bestowing such sleight sence thereon as you shal thinke fit; then cast forth your Alleys and divide them from the Quarters by paring away the grane swarth with a paring spade

spade finely and even by a direct line, then having those of labourers, cast up the quarters, then breaking the moulds and lelabelling it you shall make sad the Earth againe, then upon your Quarters you shall draw forth either knots, armes, or any other devise which shall be best pleasing to your fantic, as eyther knots with single or double Trayles or any other emblemicall devise, as Birds, Beasts and such like; and having trenched those devises prettily deepe, then instead of heards to set in them, take greene sods of cleane short grasse; and cutting it proportionably to the knot, lay them into the trench and joining sod to sod close and artificially, you shall set forth your whole knot or the portrature of your armes or other devise; and then taking a cleane broome that hath not formerly bene swept withall, you shall brush all uncleanness from the Grasse, and then you shall behold your knots as compleat and as comely as if it had bene set with hearbes many yeres before. Now for the portrature of any living thing, you shall cut it fourth joining sod into sod, & then afterward place it in the earthmoio if in this plot of ground (which you make your Garden) there be eyther naturall or artificiall Mounts or Bankes, then upon them you may in the selfesame sort with greene sods set forth a sight eyther at the field or River, or the manner of hunting any chaffe, or any historie of other devise that you please, onely in working against Mounts and bankes you must observe to have many small pinnes to stay your worke and keepe your sods from slipping one from the other till such time as you have made every thing fast with earth, which you must ramme very close and hard. As for flowres or such like adornments, you may (if the time of the yere serve) the morning before remove them, with their earth, from some other Garden, and plant them at your pleasure, or otherwise you may adorne it with artificiall flowres made of honye and such like stuffe and usuall to be bought in many places, as also artificiall fruites made of Bladders, paper or palls and coloured unto the life. Now if you will adorne this Garden with divers colours eyther to distinguish armes, knots, or the earth it selfe, you shall thus make your colours, first for yellow it is eyther made of yellow clay usuall almost to be had almost in every place, or the yellowest



lowest Sand, or for want of both of your Flanders stile which is to be bought of every Ironmonger, or Chaundler, and any of these, you must beat to dust; white you shall make of fine Chalke beaten to dust, or of well burnt Plaster, or for necessitie of the whitest Lime, but that will soone decay; Blacke is made of your best and purest charcole dust well clesed and sifted. Red is made of broken uselesse well burnt Wickes beaten to dust, and well clesed from spots; blew is to be made of white Chaulke and blacke cold dust mixed together, till the Blacke hath brought the white to a perfect blewnesse. Lastly Greene; both for the naturall proprietie belonging to the Garden, as also for better continuance and longlasting, you shall make of greene Sodds, or Camomile well planted. where any such colour is to be used: as for the rest of the colours you shall sift them and sow them in their proper places, then with a flat beating batell you shall stre it fast upon the face of the earth.

There be other wayes of beautifying Gardens, as to distinguish the knots either with Tileheards, with the Shankbones of Sheepe, and other small cattell, with great Coggesstones, and a world of other things like unto these. But I keepe you long in this ill-favoured Garden, if it please you we will walke into the Orchard adjoining.

Both the Garden and the Orchard as you see are inclosed with severall hedges and ditches, whereby they are defended from hurtfull beasts and unruly folke (as I told you at the first) when I began to speake of the inclosing of Gardens and Orchards.

Some doe grow and spring of themselves; a number of others againe are to be sowne. Those that grow wilde without the labour of man, doe beare their seedes each one according to his kind: but those that are set and well, doe yeld greater increase. There are others againe that are alwaies greene and doe never lose their leafe; which are (as Constantine repareth) these, the Olive, the Apricot, the Lemon, the Citron, the Bag, the Olive, the Cypresse, the Vine, the Holly, the Rose, the Myrtle, Cedar, and Juniper. As for strange Trees, and those that will growe no where but at home, we will not meddle withall: we will therefore begin first with those that yeld us sustenance, & beare fruit,

Of Or-  
chards.



fruits, and those are diuided into three sorts: for either of the Trees they come to be Trees as the Olive is, or else Shrubs as the wilde Date, or neither Tree nor Shrub, as the Vine.

**THE 1<sup>st</sup>.** I desire to heare your opinion of every sort, for I thinke it no small skill to plant such faire Gardens, Orchards, and Vineyards. Whethinkes you haue used a wonderfull good order, that amongst your Vines, you haue intermedled Olive trees, Figgetrees, Almonds, and Apperors, and that you haue seuered your Orchard from your Garden, & your Vineyard from them both, with faire hedges and ditches.

**MARIVS.** It was needfull so to doe, leaſt my folks labouring in some of them should come into the rest, contrary to my pleasure. First, if you will, I will speake of those that bring us fruit, and then of the wilde, and the order of setting and planting of Woods. First (as Columella saith) that ground that serueth for an Orchard, will serue for a Vineyard, as you see it oorth here; and if the ground be hilly, rugged, and uneven, it is more mete for a Vineyard than for an Orchard. If therefore you will make an Orchard, you must chuse such a ground as is mete for it: a rich ground, leuell, and lying upon the Sunne, which when you haue found, you must well enclose it: as I taught you before in the enclosures of Gardens, that it may be out of danger of Cattell and knaves: for although that the trampling, and dunging of Cattell, is not unprofitable to the Trees, yet if they be either burned or broken while they be young, they will soon come to nought. When you meane to dress your Orchard place three fences, you shall make your furrowes a yere before you plant them, so shall they be well seasoned with the Sunne & the raine: and whatsoever you plant, shall the sooner take. But if you will needs plant the same yere that you make your furrowes, let the furrowes be made at least two moneths before: after all them full of straw and set it on fire. The broader and wider that you make your furrowes, the fairer and more fruitful will your trees be, and the fruite the better. Your furrowes must be made like an oven, or furnace, wider at the bottome then above, that the roots may spread the better, and the colde in Winter, and the heats in Summer, may the better be kept from it, and also in steepe grounds, the earth shall not so easily be washed away. In setting

How to  
make an  
Orchard.

of your fruit trees and vines, you must place them in order, either Cheekwise, or Betwise: which need full order of setting, is not onely profitable, by receiving the ayre, but also very beautifull to the eye: when as which way soever you looke, you shall see them stand in ranke; and which also is to good purpose, for the Trees shall equally receive their moisture from the ground.

I have used two sortes of this catred order, one wherein my Trees stand foure square like the Chequer or Chessboard: the other not in square as the first but losing-wise or Diamond-wise, like the glasse windowes or Pacts. You must frame it according to the nature of the trees, least the lower sort be shadowed of the higher. You must also set them a good distance asunder, that their branches may spread at pleasure, for if you set them too thicke, you shall be able to sow nothing betwixt them, and they will be the lesse fruitfull. Therefore Palladius would have the space betwixt them, thirty foote at the least: there is more profit in the generall disposing of them, entermedling the greater with the lesser, so as the great ones doe not annoy their underlings, either with their shadow or dropping, for that they grow not equall to them in strength or bignesse. Pomegranats and Apples must be sowed naxer together, as nine foote asunder, Apples naxer then they, and Peares naxer then them both: but of them there are sundry sortes. Almonds and Figtrees must also be set naxer. And because there is a naturall friendship and love betwixt certain Trees, you must set them the naxer together, as the Vine and the Olive, the Pomegranate and the Appletell. On the other side, you must set farre asunder such as have mutuall hatred among them, as the Vine with the Filbert and the Way. There are some of them, that desire to stand, two & two together, as the Chestnut: the droppings also do great hurt of all sortes, but specially the droppings of Oakes, Pinetrees, and Gasholmes. Moreover, the shadows of divers of them are hurtfull, as of the Walnut tree, whose shadow is unwholesome for men, and the Pinetree that killeth young springs: yet they both resist the winde, and therefore are best to be set in the outer sides of the Orchards, as hereafter shall be said. Of the place & the order, perhaps you thinke I have said enough, and loke that I should proceed to the order of planting and setting.

Dropping  
of trees,

Friendship  
amongst  
Trees.

Shadowes  
of Trees.

Time of  
planting.

Time for  
grafting.

The ob-  
servation  
of the  
Moone.

The kinds  
of plan-  
ting, and  
grafting  
of trees.

Three  
kinds of  
Grafting.

What  
trees are  
best to be  
grafted be-  
twixt the  
barke and  
the wood.

What  
trees are  
best  
together.

Understand then, the chiefest time of planting (as Florentine saith) is the end of Summer, for then is nature most occupied about the roote, as in the Spring about the upper parts: and therefore grafting is meetest in the Spring, and setting in the end of Summer: for the plants are watered all the Winter, & therefore it is best setting or planting, from the setting of the seaven stars, untill the twelfth of December. In the Spring time, you may set those things that you forgot before: at what season soever it be, looke that you set them in the afternoone, in a faire westerly winde, and in the wane of the Moone. Pliny saith, that this note is of great importance for the encrease of the Tree, and goodnesse of the fruit. If the tree be planted in the encrease of the Moone, it groweth to be very great: but if it be in the wane, it will be smaller, yet a great deale more lasting.

We plant eyther by Grafting, setting of the kernell, or the stone, setting the rootes, stockes, or slips, grafting betwixt the Barke and the Tree: some are planted in some of these sorts, other in all. In Babilon (as they say) onely the lease set, comes to be a tree: first I will speake of Grafting, and then of the rest. There are that appoint but three kinds of Grafting, betwixt the barke and the woode, in the stocke, and implastering, or inoculation. The first sort they call Grafting, the second imbranching, the third inoculation, or imbudding. Such Trees as have thickest barkes, and draw most sappe from the ground, are best grafted betwixt the barke and the wood, as the Figge, the Cherrie, and the Olive: those that have thin rindes, and content themselves with lesse moisture, as if the sappe leaving the barke should gather it selfe to the heart, as the Drenge tree, the Apple tree, the Vine, and divers others, in these it is best to open the stocke, and graffe the wood. Some Trees are also best Grafted upon other some, the Figge that prospereth best upon the Mulberry stocke, and the Plane tree: the Mulberry upon the Chestnut, and the Beech, the Apple, the Pearre, the Olive, and the white Poplar, wherein if you graffe, you shall have your Mulberries white: upon the same stocke are grafted the Pearre, the Quince, the Medler, and the Serbise: the Pearre upon the Pomegranate, the Quince, the Mulberry, and the Almond. If you

Graffe

Grafte your Pearre upon a Pillare, you shall haue red Peares: To haue  
 the Apple is Grafted upon all Pearre Stockes, and Crabsetts, red Peares  
 Willow, and Poplar: being Grafted upon the Quince, it  
 bringeth forth the fruit which the Cookes call Melimella: it is  
 also Grafted upon the Plumtree, but being Grafted upon the  
 Plane tree, it bringeth forth red Apples: The Medlar being  
 Grafted upon the Thorne, the Grasse groweth to great big-  
 nesse, but the stocke continues small: upon the Pine tree, it  
 bringeth a sweet fruit, but not lasting: The Peach grafted  
 in the Thorne, or the Birch, groweth to be very saice and great:  
 the Almond and the Peach being ioined together, and grafted  
 in the Plumtree, will beare a Peach with an Almond in the  
 stone. The Filbert will onely be grafted in the Willow, not  
 agræing with any other. The Pomegranate delighteth in di-  
 vers Stockes, as in the Willow, the Bay, the Ashe, the Dam-  
 son, the Plum, and the Almond, upon all which he prospereth  
 well. The Damson groweth very well upon any kind of wilde  
 Pearre, Quince, and Apple: the Chestnut lieth well the Wal-  
 nut, and the Birch. The Cherrie refuseth not the companie  
 of the Peach, nor the Turpentine, nor they his: the Quince  
 will well be grafted upon the Barberie: the Vertile upon the  
 Sallow: the Plum upon the Damson: the Almond upon the  
 Filbert: the Citron, because of his tender Tree, and thime  
 rinde, will scarcely beare any other grasse, and therefore con-  
 tents himselfe with his owne branch. The Vine that is graf-  
 sed upon the Cherrie tree (Florentinus promisseth) will beare  
 Grapes, & grafted upon the Olive, which bringeth forth a fruit  
 that bearing the name of both his parents, is called Elæoxa-  
 philos. In fine, all young Trees that haue sap in the barke, may  
 be grafted: if it be greater, it is best grafting nere the roote,  
 where both the barke and the wood, by the reason of the néerenes  
 of the ground are full of sappe. He then that will graft either in  
 the stocke, or betwixt the stocke and the rinde, let him gather  
 his grafts from a fruitfull tender tree, and full of ioyns, and out  
 of the new spring, except he meane to Grafte an old tree, when  
 as, the surdier Grasses be, the better they are, otherwise the  
 last shootes of such trees as haue lately borne will be the best. You  
 must gather them on that side the tree that lyeth upon the

& Apples.

A Peach  
 with an  
 Almond  
 in it.

Olive  
 Grapes.

The choise  
 of Graf-

The knots.

The time  
of graftingThe man-  
ner of  
grafting.

South Southwesterly better than North Northerly. Vnder  
gill forbiddeth those that groweth on the top, Graffing them  
better that growes out of the side. To be short, your grasses  
must be full of buds; lately growne out. In the, the rinde  
frithe; growe in the middle to growe; they must be of the last  
yeares growth, with cleare hollowe by the knotes; soe that  
declared by the growth. The knots of all trees are not  
to be gathered all the year of the year, and figge trees are not  
in the middle part, but take best in the top, and the knots from  
thence you must gather. The Olive, which is the best of  
sappe in the world; and the outer part of the knot. Those best agree  
together, whose winds are most of nature, and the bloodie,  
and beare both about a time. You must gather the grasses in  
the wane of the Moone, tenne dayes before you Grafte them.  
Constantine addeth this reason. That it is made the Grafte doe  
a little wither, that he may the better be receiued of the stocke.  
You must appoint your grafting time in the spring, from March,  
when as the buds doe begin to burgen, but not come out (al-  
though you may graffe the beare when his leaues be out) un-  
till May: so Grafting in raine is profitable, but not so in-  
branching. The Olive, whose Springs do longest bid, and  
have much sappe under the barks, the abundance whereof doth  
hurt the Grafte, must be Grafted (as Florentine sayth) from  
May, till Iunne. Columella would have the Olive Grafted from  
the twelfe of March, till the first of the first of Aprill, and the  
time of Grafting to be the Moone increasing, in the afternoone,  
when there bloweth no Southwinde. When you have found a  
good Grafte, take your knife (being very sharpe) and pare it a-  
bout three fingers from the ioynt downward, so much as shall  
be meete to be set in the stocke: that part that is under the ioynt  
(not perishing the pith) you must cut with your knife, as if you  
should make a pen, so as the wood with the wood, and the barke  
with the barke, may ioyne together, as iust as may be. Which  
being done, if you meane to graffe in the stocke, you must first  
sawe it smooth, then cleave it in the midst with a sharpe knife,  
about three fingers: and to the end you may handsomely put  
in your Grafte, you must have a little wedge of woode or iron.  
(Pliny thinkes it better of bone) which wedge (when you will  
grasse

grasse betwene the rinde and the stocke ) must be made flatte on the one side, and round on the other, and the Grasse must be pared also flat on that side that must stand next the wood, taking alwaies good heed, that the pith be not perished: the other part must onely have the rinde pulled off, which after you must set in the cleft, or betwixt the barke, till you see all parts agree together. Some doe cut the point of their Grasse thersquare, so as two sides are bare, and the other covered with his barke: and in that sort they use to Grasse in a stocke one against another: but it is thought best to Grasse no more but one. When you have thus set in your Grasse in the stocke, plucke out the wedge: but here is a great carefullnesse, and heed to be used: and therefore good Grasters, thinke it best to hold the Grasse even with both hands, least in the binding and pulling out of the wedgc, the Grasse be hurt, or stand uneven. For avoyding of which, some use so to binde the stocke about, and after to put the wedge, the bands keeping it from opening too wide. The harder they be set in, the longer will they be ere they beare, but will indure the better: you must take heed therefore, that the cleft be not too slacke nor too straight. When you have thus Grassed, binde the stocke with a twig, and cover it with loame, well tempred with chaffe, two fingers thickness, and (putting mosse round about it) tye it up so, that there come no raine at it, nor be hurt with the sunne or the winde. This is the order both in the old time, and at this day used: though in Columellas time (as it appeareth) they were not wont to Grasse, but onely betwixt the barke and the wood: for the old people (as Plinie writeth) durst not as yet meddle with cleaving the stocke: at length they presumed to make holes, and Grasse in the pith, and so at last wared bold to cleave the stocke. Cato would have the stocke covered with clay and chalke, mingled with sand and Oye-dung, and so made in moyter. Sometime they Grasse with the top of the Graft downeward, and they doe it to make a little Tree spread in breadth. It is best Grassing next the ground, if the knots and the stocke will suffer: and Plinie would have the Grasse grow forth not above five fingers. If you will Grasse a little Tree, cut it nere the ground, so as it be a foote and a halfe high. If you would carry your Grafts farre, they

To keepe  
your  
Grafts

will



will longest keepe their sappe, if they be thrust into the cote of a Rape: and that they will be preserved, if they lye betwixt two little guts, running out of some River or fish pond, and be well covered with earth. Now for inoculation or implastring which is no new manner of grafting, we finde that it was used of the Latines, and the Greeks, when taking off a lease or little bud, with some part of the rinde with him, we graft it into another branch, from which we have taken as much barke. This order (Columella saith) the husbands in his dayes were wont to call implastring, or Inoculation: and before Columellas dayes Theophrastus in his Booke De causis Plantarum, doth shew the reason of Inoculation. Plinie doth say it was first learned of Dawes, hiding of seede in caves and holes of Trees. This kinde of Grafting, as Columella doth write, and our Gardeners themselves confesse, is best to be used in Summer, about the twelwe of June: yet Didymus saith he hath Grafted in this manner, and hath had good increase with it in the Spring time. And sith it is the daintiest kinde of Grafting, it is to be used in all Trees, but onely in such as have a strong, a moyst, and a sappy rinde, as the Olive, the Peach, the Figge, the Apple, the Pearre, the Cherrie, and divers others trees which are full of milke, and have a big barke. Of that Tree that you meane to Graft, chuse the youngest and the fairest branches you can, and in them take the bud that is likeliest to grow, and marke it round about two inches square; so as the bud stand even in the midst, and then with a sharpe knife cut it round about, and flay off the rinde, taking good heed you hurt not the bud, and take out the peece. Afterwards, goe to the Tree you meane to Grafte on, and chuse likewise the fairest branch, and pare away the rinde a little space, and voyne in your bud so just, as the rindes may agree together so close, as neither water nor winde may enter in. You must take that you hurt not the Wood, and that the rindes be of one thickness. When you have thus done, binde it up, so as you hurt not the bud: Then clay it over all, leaving libertie enough for the bud. Cut off all the spring that growes about it, that there be nothing left to draw away the sappe, but that it may onely serve the Graft: After one and twentie dayes, unloose it, and take off your



your cowering, and you shall see your bud incorporated in the  
branch of a strange tree. Columella speaketh of another sort  
of Grafting, to bore a hole in a Tree with an Augre, either to  
the pith, or the uttermost rinde, going something slopewise  
downeward, and getting out all the chips cleane, take a Vine, or  
an arme of the best Vine, not cut from his old mother, & paring  
away the over rinde, thrust it fast into the hole, being all moyst  
and full of Sappe, leaving a bud or two onely upon it: after-  
ward, stoppe the hole well with Masse and Clay, and commit  
it to the earth. In this sort you may Grafte Vines upon  
Elmes, so shall the branch live, being both nourished with the  
old Mother and the new Father. Two yeeres after, you shall  
cut off the new grafted branch, and the stocke wherein you  
grafted, you shall sawe off a little above the boring, so shall the  
grasse become the greatest part of the plant. The like doe our  
Countriemen, taking a branch of a Beech a fote thicke: and  
when they have cut it, and bored it, they set in it the branches  
of the best Pearre or Apple that they can get, setting the same in  
a very wet ground in March; and in the same Moneth the yeere  
after, taking up the Beech, they cut it asunder with a saw be-  
twixt the holes and the branches: and every peere of stocke  
with his branch, they set in very rich and fruitefull ground.  
There are some that brag of another kind of grafting, not much  
unlike to the former, whereof notwithstanding, African in Con-  
stantine maketh mention, as tried in a Peach. They will a  
man to take the branch of a Willow as big as your arme,  
and two Cubits in length, or more: this they would have you  
to bore through the midst, and after slipping off the branches of  
a Peach as he stands, leaving onely the top untouched, they  
would have you to make the Peach passe through the Willow  
basse, and that done, to bove the Willow like a bow, setting both  
his ends into the earth, & so to binde the hole up with moss, mor-  
ter and bands. The yeere after, when as the head of the Peach  
hath sorned himselfe with the pith of the Willow, that both the  
bodies are become one, you shall cut the Tree beneath and re-  
move it, and raise up the earth, so as you cover the Willow bow  
with the top of the Peach; & this shall bring you Peaches with-  
out stones. This kind of Grafting must be done in moist pla-

Wimble  
Grafting

Another  
maner of  
Grafting.

Propagati-  
on, and his  
kindes.

ces, and the Willowes must be holpen with often wattrings, that the nature of the Tree may be of force. The kinds of manners of propagation, are declared by Pliny, who telleth of two kindes: the first, wherein a branch of the Tree being bowed downe, and buried in a little furrow, and after two yeeres cut off, and the plant in the third yeere removed: which if you intend to carrie any far distance off, it is best for you to burie your branches in Baskets, or earthen vessels, in which you may aptly sett, and carrie them. And another more delicate way he speaketh of, which is to get the roote out of the very Tree, laying the branches in Baskets of earth, and by that meanes, obtaining rootes betwixt the very fruit and the tops, (for by this meanes the root is fetched from the very top, so farre they presume) and from thence fetch them, using it as before: in which sort you may also deale with Rosemarie and Sabine. Columella sheweth a way, how slippes of all manner of Trees may be grafted in what Trees you list.

THRA. And some are also set of the slips, or slivings: my selfe have plucked a branch from a Gulberrie Tree, and busling the end a little with the Wallet, have set it in the ground, and it hath growne to be a faire Tree. The like hath bene tryed (as they say) in Apples and Peares.

MARIVS. You say well; for Nature hath shewed us, that the young liences, plucked from the rootes of the trees will grow: the youngest are best to be planted, and so to be pulled up, as they may bring with them some part of their mothers body.

In this sort you may plant Pomegranats, Filberts, Apples, Seruisses, Medlars, Ploms, Figges, but specially Vines, and sometimes Cherries, and Myrtles. Of the Stocke and the branches are also planted the Almonds, the Peare, the Gulberry, the Denge, the Olive, the Quince, the Ivis, and the Turkish Plome: which the oftner you remove them the better they prove. Pliny saith, the branches cut from the Tree, were at the first onely used for Hedges; Elder, Quinches, and Briers mingled together: afterwards for use, as the Poplar,

the

the Alder, and the Willow; at this day we set them where we best like. We must be taken, that the Sticks, or the sets be of a good kinde, not cracked, knotie, nor sekered, nor slenderer then that a man may well gripe with his hand, nor lesse then a foot in length.

THRA. It remaineth now that you speake of the setting of the fruit of kernell.

MARIVS. Nature (as Pliny saith) hath taught us to set the kernell, by the seedes deuoured of Birds, and moistened with the warmth of their excrements, and after voided in the bowels and riles of Trees: whereby we finde many times a Plane Tree growing out of a Baye, a Bay out of a Cherry, and a Cherry out of a Willow. Many Trees are set of the fruit, kernell, or stone, which grow partly of themselves, by reason of the falling of the fruit: as Chestnuts, Castanets, and Walnuts. Columella saith, they are the fruitfuller Trees that spring of their fruit, then those that are set of the stocke, or the branch. Some delight to be set in Trees, and not in the ground: when they have no soyle of their owne, they live in a stranger. Of the fruit are kernell, by planted Guts, Almonds, Pistaces, Chestnuts, Damsons, Plums, Pineapples, Dates, Cypric Bayes, Apples, Weares, Paples, Fittrees, Cherries, Peaches, & Abbotches: but let us planted theye hope to be the kindest. Some of these doe grow in Grassing and other wayes: experience teacheth, that the Gut and the Terebinth are Grassed; and Demageron with lesser as much: neither are all seeds, kernells, and stones set in like sort, as hereafter shall be seene. Some are laid in water before, others not: some for three dayes in hony and water, and at the fall of the leafe are buried in the ground till March: and then set Guts are onely layd in moyle dung a day before, and a some in water and hony onely a night, least the hardness of the hony destroy the sprout. Some are set with their toppes standing upward, as the Chestnut, others downward, as the Almond, though this is not greatly to be regarded, like wee see the fruit that falls from the Tree, as is let fall by Birds, hath rather best of any other.

The keeping of plants.

THRA. The ordering of an Apple Garden may not be passed

Of Impe Gardens.

passed over, wherein as in a Parke, the young plants are nourished. And because the Sunne sometimes ought to be kinder, & tenderer than the Mother, a mate ground must be chosen for the purpose: that is, a ground dry, fat, and well laboured with the Mattocke, wherein the stranger may be well cherished, and very like unto the soyle, into which you meane to remove them. The kernels, or Stones, must not be altogether naked, but a little covered with some part of the fruit, so shall they afterward endure the longer. They must be set a fote, or thereabouts asunder: After two yeeres they must be removed: & because their rootes doe runne very deepe into the ground, they must be somewhat bent, or turned in, to the end they may spread abroad, and not runne downeward. Above all things, you must see it be free from stones and rubbish, well fenced against Moultry, and not full of clunkes, and cists, that the Sunne burne not the tender rootes: they must be set a fote & a halfe asunder, that they hurt not one the other with their neere growing. Among other evils they will be full of Wormes, and therefore must be well taken and weeded: before growing rank, they must be trimmed and pruned. Care should have them covered over with Lattises or, on forks, to let in the Sunne, and to keepe out the cold: Thus are the kernels of Peares, Wine Apples, Puts, Cypricke, & such others cherished. They must be gently watered for the first three dayes in the going decline of the Sunne, that they equally receiving the water, may open the sooner. Lippes, or Luckie Plumbs, Puts, Walnuts & Chestnuts, Bayes, Cherries, Pistachies, Apples, Dates, Peares, Bayles, Fittes, Plumbs, and divers others are set of the Stone or kernels. In removing of them, have speciall regard, that they be set in the like soyle, or in better, not from hot and forward grounds, into cold & backward, nor contrary from those to the other. You must make your Furrows so long before, if you can, that they be overgrown with good mould. Mago would have them made a year before, that they may be well seasoned with the Sunne, and the weather: Or if you cannot so, you must make fires in the middle of them two months afore, and not to set them, but after a shewre. The depth of their setting must be in stiff clay or hard ground, three Cubites: and for Plumb trees a handfull more. The Furrows must be made funnellike, straight above, and broad in the

the bottom: and in blacke mould, two Cubites and a hand broad, being square corners: never deeper than two fote and a halfe, nor broader then two fote broad, nor never of lesser depth, then a fote and a halfe, which in a wet ground will grow nere the water. Such as delight in the depth of the ground, are to be set the deeper, as the Albe, and the Olive: these and such like, must be set foure fote deepe, the others it sufficeth if they stand three fote deepe. Some use to set under their Rotes round little stones, both to containe, and convey away the water: others lay gravel underneath them. The greater Trees are to be set toward the North and the West, the smaller toward the South and the East. Some will have no Tree removed under two yeeres old, or above three: and others when they be of a yeeres growth. Caro refulleth Virgils authority that it is to great purpose to marke the standing of the Tree, as it grew at the first, and to place it towards the same quarters of the heaven againe. Others observe the contrary in the Vine, and the Figge tree, being of opinion that the leaves shall there, be the thicker, and better defend the fruit, & not so soone fall: beside, the Figge tree will bee the better to be climbed upon. Moreover, you must beware that by long tarrying, the Rotes be not withered, nor the winde in the South when you remove them, where by many times they dye, the husband not knowing the cause. Caro condemneth utterly all manner of windes or stormes in the removing of Trees, and therefore it is to great good purpose to take them up with the earth about them, and to cover the Rotes with a Turffe, and for this cause Caro would have them to be carryed in Baskets filled with earth up to the toppe: the Tree must so be set, as it may stand in the middle of the Trench, and so great heed must bee taken of the Rotes, that they be not broken, nor mangled.

Among all Trees and plants, the Vine by good right chal-  
 lengeth the soveraignty, sining there is no plant used in hus-  
 bandry more fruitful and more commodious than it, not onely  
 for the beautifulnesse, and goodlinesse of the fruit, but also for  
 the easinesse he hath in growing, wherby hee refuseth not al-  
 most any kinde of Country in the whole world, except such as  
 are too extremely scorched with the burning heate of the Sun,

as else so extremely frozen with the vehement cold; prospering also as well in the plaine and champion Country, as it doth upon the hilly and Mountaines Country: Likewise as well in the stiffe and fast ground, as in the soft and mellow ground: And oftentimes in the Loamy and leane ground as in the fat and foggie, and in the dry, as in the moist and mitty; yea, and in many places, in the very Rocks it groweth most abundantly and most fruitfully, as is to be seene & proved at this day about the River of Rhine in Germanie, and the River of Mosell in France: and above all this, it best abideth and beareth the contrary disposition of the heavens.

The invention of the Vine.

It was first found out by the Patriarche Noah, immediately after the drowning of the world: It may be, the Wine was before that time, though the planting and the use thereof was not then knowne. The Heathen both most falsely and very fondly, as in many other things, doe give the invention of the same unto the God Bacchus. But Noah lived many yeeres before either Bacchus, Saturnus, or Vranus were borne.

The Vineyard most gainfull.

There wants not great and learned men, that affirme the Wine to be most gainfull: and declareth that olde fruitefullnesse of the Vines, mentioned by Cato, Varro, & Columella, which upon every Acre yielded seaven hundred Gallons of Wine, and the Vineyards of Seneca, wherein he had yearly upon one Acre 1000. Gallons: when as in Cozne ground, Pasture, or Wood land, if a man doe get upon one Acre xx. s. a yeere, it is thought a great matter.

The ordering of the Wine-bearing Vines, as the sorts of Vines are sundry, neither can they be contained in certaine numbers, so; there is as many sorts, as there is of ground. Homer giveth the chiefest prayse to the Wine of Meroia, and Parnium. Virgill most commendeth Rhenish wine: others the wine of Arminia, Lamentana, Candy, and Corlega, but I meane to speake of those that are commonly in our dayes. In Italy at this day they make most account of wine of Corlega, Romani, & Meylina. In Spaine they best esteeme the wine of S. Martine, of Ribodari, and Gibraltar. In French the greatest prayse is given to the wine of Orleans, Anjou, & Greves: Germanie began but of late to meddle with planting of Vines, so; Varro writeth, that



the Frenchmen and Germaines had in his time both Vines and Olives: but at this day the Rhine, the Necker, the Mene, Mosel, and Danaw, may compare with any Countries, so; goodness of their Vines.

The Vine may be planted five sundry waies: for either his branches are suffered to runne in safety upon the ground, or else without any stay grow upright, or having a stay or prop set for them, they climbe up by it; or else runne up by a couple of stiffe props, called of Livie a poke, or else sustained with foure of those poakes, which of the resemblance that they have with the hollow gutters of a house, are said to be guttered: others againe suffered to runne upon frames like Arbours, serving to sit under, and are called Arbour Vines: others runne up the walles of houses. Moreover, the poaked Vines, are tyed together, and joyned with thre or foure props, as if they were poaked: some doe let them ruane upon trees, as commonly in Lumbardy, they are suffered to climbe upon Elmes, Willowes, and Ashes, where they greatly prosper: neither doe they like all manner of trees, so; they hate the Nut tree the Bay, the Radish, and the Coll: as againe, they love the Poplar, the Elme, the Willow, the Figge, and the Olive tree. The Vines that are poaked, or stayed up with props, receive more aye, and beare their fruit the higher, & ripe the better, but aske more trouble in the looking to: and these are so ordered, that they may be plowed, where by they are the more fruitful, because they may the oftner, and with the lesse charge be tilled. The Vines that creep upon the ground, make much Wine, but not (as Columella saith) so good.

THRA. Now to your ordering of them.

MARIVS. First, I will speake of the ground, and of the digging of it, and after of the planting and cutting of them. And first you must take for a speciall note, that every Vine will not agree with every place, nor yeld his Wine in like goodnesse, of such force is the qualitie of the aye, neither will all kinde of ground serve: For Columella doth counsaile to set the Vine in a wilde ground, rather then where Corne or bushes have growne: for as so; old Vineyards, it is most certaine, they are the best places of all other to set new in, because the ground

Trees  
which be  
friends or  
foes to the  
Vine.

The ordering  
of  
Vines.

What  
ground is  
best for  
the Vine.

is



is matted, and as it were netted with the remaines of the old rootes: neither hath it lost the payson of the rotten and old stinking rootes, wherewith the soile (glutted as it were with venime) is benumbed: and therefore the wilde and untilled ground is chiefly to be chosen, which though it be over-growne with shrubbes and trees, may yet easily be ridde. If such wilde ground be not to be had, the best is the plaine champion land without trees: if neither such a ground, then the light and thin bushie ground, or Olive ground. The last and worst (as I said) is the old rotten Vineyard, which if necessitie compell you to take, you must first rid the ground of all the old rotten rootes, and then cover it either with olde dung, or with the newest of any other kinde of manuring: the rootes being thus digged up, must be laid up together, and buried. After must the ground be considered, whether it be mellow and gentle: It is thought to be good, that is something gratie and gravelly, and full of small pebbles: so that it be mingled with fat mould withall, which if it be not, is utterly disallowed.

Dame Ceres joyes in heavy ground, and Bacchus in the light.

You shall perceiue it to be massie and thicke, if being digged, and cast into the hole againe, it riseth ober: if it scarcely fill the hole, it is a signe that it is light and thinne. The Flint, by the generall consent of husbandmen, is counted a friend to the Vine, specially where it is well covered with good mould: for being cold and a keeper of moisture, it suffereth not the rootes to be scalded with the heate of Summer: so much that Columella doth use to lay certaine stones about the side of the Vine trees, so that they exceed not the waight of fife pound a peece: which as Virgill hath noted, keeps away the water in Winter, and the heat in Summer.

Hurl in the thirstie stone, or therein throw the nastie shelles.

So do we see the banks of the Rhine being full of these stones, to yeld an excellent good Wine: but the stones that lye above ground, are to be cast away: for in the Summer, being heated with the sunne, they burne the Vine, and in the Winter they hurt them with their coldnesse, contrarie to those that lye in the bottome. But the best of all is the soote of an hill, which receiveth the falling mould from the toppes, or the valley,

bally, that with overflowing of Rivers hath bene made rich.  
 Neither is Chalkie ground to be refused, though the Chalke  
 of it selfe that Potters use, is hurtfull to the Vine. The  
 hungry sandy ground, the salt, bitter, and thicke ground,  
 is not meete for the Vine: yet the blacke and reddish sande,  
 medled with some moyst earth, is of some allowed well enough.  
 November, neither ground too hotte, or too colde, too drye, nor too  
 moyst, too slender, nor too thicke, that will not suffer the raine  
 to sinke, is to be used for Vines; for it will easily gape and  
 open, whereby the Sunne comming in at the craivesses,  
 doeth burne the Vines: That againe which is overthinne,  
 letting in as it were by vents, the Raine, the Sunne, and  
 the Winde, doth drie up the moysture of the vines: the  
 thicke and thicke ground is hardly to be laboured, the fat  
 ground subject to too much rankenesse, the leane ground to  
 barrennesse; wherefore there must be an even temperature  
 amongst these extremities, as is required in our bodies,  
 whose health is preserved by the equall medlie of heats and  
 colde, dryth and moysture, fulnesse and emptinesse, or thicke-  
 nesse and thinnesse: neither yet is this temperature in  
 ground for Vines so iustly to be eved, but that there is re-  
 quired a more enclining to the one part, as that the earth  
 be more hot then colde, more drye then moyst, more subtil  
 then grosse, specially if the state of the Heavens agree. As  
 gainst what quarter thereof the Vineyard ought to lye, it is  
 an olde controvertise, some like best the rising of the Sunne,  
 some the West, some the North: Virgill misliketh the West:  
 others againe thinke the best lying to be upon the South.  
 But in generall, it is thought best in colde Countries, to  
 have it lye toward the South, in warme Countries upon the  
 East, in hot burning Countries, as Egypt and Barbarie, upon  
 the North. Plinie would have the Vine himselfe stand to-  
 wards the North, and his sprigs, or shotes towards the  
 South. A fit ground and well lying, being found out, must  
 be diligently digged, douned, and trenched: all unprofitable  
 weeds must be pulled up, and throwen away, lest they should  
 spring againe: either corrupt the young plants, or hinder the la-  
 borer. The Vine is planted according to Virgils rule, in the fall

What  
 quarter of  
 the heaven  
 the Vine  
 must lie as  
 gainst.

The time  
for planting  
of Vines.

of the lease, but better in the Spring, if the weather be rainy, or cold, or the ground be fat, champion, or a watrish valley: & best in the fall of the lease, if the weather be drye & warme, the ground drye and light, a barren, or a rugged hill. The time of planting, in the Spring (as Columella saith) endureth forty dayes, from the 3des of February, untill the Equinoctial: and in the fall of the lease, from the 3des of October, to the Kalends of December. Cassian in Constantine, being taught by experience, saith, in watry grounds you should rather plant in Autumne, when the leaues are fallne, and the plants after the Tinerage deliuered of the burden of their clusters, sound and strong, before they be nipped with the frosts, for then they best agree with the ground, nature applying her selfe wholly to the nourishing of the roote. The time of grafting, Columella saith, is of some extended from the first of November, to the first of June, till which time the shote or grasse may be preserved: but it is not well liked of him, who rather would have it to be done in warmer wea'ther, when the Winter is past, when both bud and rinde is naturally moved, and is safe from cold, that might annoy either the Grasse, or the Stocke: yet he granteth (when haste requireth) it may be done in the fall of the lease, when as the temperature of the ayre, is not much unlike to the Spring: for which purpose, you must chosse a warme day, and no wind stirring. The Grasse must be round and sound, not full of pith, but of buds, & thicke of ioynts, the Tenint whereof must not excede thre inches, and smooth, & even cutte: the Stocke and the cleft must be well closed with clay and mosse. Those that grow toward the South, must be marked.

Grafting  
of vines.

What  
Grasses to  
be chosen.

The like is to be done with all other Trees. Of planting of Vines, there is two wayes, the one of the Rote, the other of the branch, or spray: The Rote is counted a great deale better then the branch or set, by reason of the forwardnesse, & vantage that it hath, in that it hath already taken roote. The Rote is set in stiff ground, well digged and laboured, in a trench of thre sorte, the set or spray, in a gentle and mellow ground: in dry ground, it is neither good to set the Rote, nor the Branch in a dry season: it is best to plant in the fall of the lease in a hot season, & in a colde and moist, in the Spring: in much wet you must set it: n thinner,

ner, in great bzieth, thicker : in what sort you shall make a Roze Garden for Vines Palladius teacheth you. The set requireth a time to rote, & being removed will beare the better fruit. The rootes doe beare fruit the second yere, or sooner : the Sets, or Branches, scarce in the third or fourth yere, though in some places sooner. Didymus in Constantine teacheth an easie and a readie way of planting the Quicksset, which is, to take of a strong and ten yere Vine, the longest and fairest branch, that groweth lowest, a sote from the ground, and laying it long in a Trench of a sote depth, to cover it with earth the space of foure foynets : and if the branch be so long, as it will serue for two burnings, you may make thereof two rootes. You must not suffer rootes to runne up upon one stay, but allowe every roote his supporter.

The Branches, or Set that you meane to plant, you must cut from a very fruitfull and flourishing Vine, that hath borne ripe & perfect good fruit, full of foynets, & not any way tainted, but whole & sound. Of such you must chose your Sets, & not of young Vines, that are weak and feeble, but such as are in their chiefe state. Whereouer you must gather your Set, not of the highest, nor the lowest, but from the middelt of the Vine : the Set must be round, smooth, full of knots and foynets, & many little binges. As soon as you haue cut it off, looke that you set it : for better both it agree with the ground, and sooner grow. If you are obliged to keepe them, burie them in the ground either loose, or loosely bound : and if the time be long that you meane to keepe them, you must lay them in emptie barrells, strating earth under them, and upon them, that the earth may lie round about them : and the barrell you must stop closely with clay, that there enter neither winde nor aie. To shall you preserve them two moneths in their goodnesse. Such as are ouer drie, you must lay them in water foure and twentie houres before you set them, and you must set two Sets together, that though the one faile, the other may take : and if they both grow, you may take up the lesser of them : you must not make a medley of sundry sorts, specially white and black together : but as Columella saith, must sort them severally. You must beware that the Sets haue not put out their springs, and that

## 156 The second Booke, entreating

you set not a withered set. Constantine would have the set something crooked, affirming that it will the sooner take roote. You must lay about them three or foure stones, and then raise the earth, that it may equally with the dung be troden downe: for the stones keepeth the earth firme, & as I said before, couleth the roote. Both the ends of the set you must annoint with Dre dung, for the killing of the wormes: as for the length, if it be full of ioynts, it may be the shorter, if it have few ioynts, you must make it the longer, and yet not exceeding a foote in length, nor a shaftman in shortnesse, the one for being burnt with ouer drynesse in Summer: the other, least being set too deepe, it be with great hardnesse taken up, but this is for the leuell ground: for upon hills, where the earth still falleth, you may haue them a foote and a hand breadth in length. Florentine would not haue the trench lesse then foure foote in depth: for being set shallow, they sooner decay, both for the want of sustenance, and great heat of the Sunne, which is thought to pierce foure foote into the ground: though some there bee that thinke three foote sufficient for the plant. The Trenches for Vines, Virgill would not haue very deepe: but deeper a great deale for Trees. Such Vines as you mean shall runne upon trees, you must plant three cubits distant from the Tree: afterwards, when they be well growen, and need to be toynd with the Tree (which you shall perceiue by his thicknes) you shall lay it downe in length, and bury it, till it come within a foote of the Tree, suffering the remaine to goe at libertie, nipping off all the buds with your nailles, except one or two, that it may the better prosper, which when it is growne up, you must toyne by little & little to the Tree, that it may rest upon it: which part of the Tree must be diligently pruned, and the sprigs and sciences that grow out of the roote, must according to Florentinus, be cut cleane away. The trees, as much as may be, must be forced to the East and West, and both the Tree and the Vine, must haue the earth well digged, and dunged about them. In rich ground, you may suffer the Trees to grow in height, but in barren ground they must be pulled at seuen or eight foote, least all the substance of the Earth be soaked up of the Tree. After your planting, you must digge the ground  
every

The length  
of the set.

every Month, and weede it, specially from the first of March, till the first of October: every thirtieth day you must digge about the young plants, and plucke up the weedes, specially the grasse, which except it be cleane pluckt up and cast away, though it be never so well covered, will spring againe, and so burne the plants, as they will make them both soule and withered: the oftener you digge them, the more good you doe them. When the Grape beeginnes to alter, you must in hand with your third digging, and when it is ripe, before noone when it wareth hot, and after noone when the heate decreaseth you must digge it, and raise the dust, which doing defendeth the Grape both from the Sunne and the Mist. According to Virgils minde, the Vine must be digged and weeded every Month: some would have them digged all the Summer long, after every beate: others againe will not have them digged as long as they bud or bidden, for hurting the springs, saying, that it is enough to dig them thrice in the yeere, from the entering of the Sunne into Aries, till the rising of the seven Stars and the Dogge. Some againe would have it done from the Vintage before Winter, and from the Ides of Aprill before it take, and then againe before it flower, and likewise before the burning houres of the day. In some places when they have digged them, they doe not straight waies cover them, but suffer the trenches to lye open all the Winter: in wet & rainy places they cover them sooner, closing up the roots with earth, and stopping all the passages of the water. Some make the trenches very deepe, & some not passing a fote deepe: and when they have done, they cover them aloft with Dre-dung, Shāpes dung, or Hogs dung, or of other Cattell: Drigions dung is the hottest, & such as causeth the Vine fastest to grow, but maketh the wood seruline. The dung must not be layd close to the Vine, but a little distant from it, whereby the rootes that spread abroad may have some helpe of it, and the dung must not touch the rootes, for breaking of them: if there be no dung at hand, the stalkes of Beanes and other Pulse, will well serve the turne, which both defendeth the Vines from frost and colde, and keepes them likewise from noysome wormes: the kernels, and the stalkes of the Grapes, doe likewise supplie the want of dung: but

The order  
ring of  
Vines after  
their plan-  
ting.

Of digging  
& dunging

What dung  
is best for  
Vines.

Where the  
dung must  
be layde.



Pitt, the  
best dung.

The order  
of digging  
or stirring  
the ground.

Dressing  
of Vines.

the best of all, is old Stale Urine. The plants of a yeere, or two yeeres old, and so forth, till five yeeres, must be discretly digged, and dunged, according to their state: in sandy ground, the best dung is of Sheepe and Goates: and in such sort you must digge the ground, that the earth that lyeth highest, be cast to the bottome, and that which was at the bottome, be layd a loft: so shall that that was dry, by the moisture within, be helped, and that which was moist and stiffe, by the heate aboue be loosened. You must also see that there be no holes nor pits in the Vineyard, but that it lie even. When you have thus digged it, and that the Vines have taken roote the first yeere, the rootes that grow about must be cut away with a sharpe knife: for the Vine, if it be suffered to roote every way, it hindereth the deepe doونه growing of the roote. The Vines that are now of two yeeres growth, we must digge and trench about two foote deepe, & threefoote broad, according to the rule of Socion. Of those Vines that climbe upon Trees, you must likewise cut off the springs that runne amongst the rootes of the Tree, lest the small roote tangling with the greater, be strangled: and therefore you must leave some little space betwixt the Vine and the Tree. Often digging causeth great fruitfullnesse: good heed must be taken, that the plants be not hurt in the digging: also it must be digged before his flourishing, or shooting out of his leaves: for as immediately therewithall he beginneth to thrust out his fruit, so he that diggeth after the comming forth thereof, loseth much fruit with the violent shaking, and therefore must digge the timelier. Cutting and dressing of the rootes, you must begin in hand with at the Ides of October: so that they may be trimmed and dispatched also: Winter. After Winter digge about the rootes that you have dressed: and before the Sunne enter the Equinoctium, leuell the rootes that you have trimmed. After the Ides of Aprill, raise up the earth about your Vine: in Summer let the ground be oftentimes harrowed. After the Ides of October (as I have said) before the colde come in, you must dress the rootes of your Vines, which labour layeth open the Summer springs, which the good husband cutteth away with his knife: for if you suffer them to grow, the rootes that grow downe will perishe, and



and it happeneth that the rootes spread all a bove, which will be subject both to cold and heat: and therefore whatsoeuer is within a foot and a halfe, is to be cut off, but so, as you hurt not the principall. You must make this riddance of the rootes at every fall of the leafe, for the first five yeares, till the Vine be full growen: after, you must dresse them every fourth yere: such Vines as are joyned with Trees, from the unhandsome- nesse, cannot be thus handled. Vines and trees, the sooner their Rootes be thus drested, the stronger and weightier they will be: but such as grow upon the sides of hills, must be so drested, as the upper rootes neare to the stocke may spread largely, and underneath towards the scoe of the hill the earth must be banked to keepe the water and the mould the better. The old Vine must not have his roote medled withall so: withering, nor be plowed, for breaking of them, but the earth a little loosed with a Spattocke, and when you have thus drest the roote, lay dung about it. After this ridding of the rootes, then followeth the prorning, or cutting, whereby the whole Vine is brought to one twigge, and that also cut within two ioynts of the earth: which cutting must not be in the ioynt, but betwixt the ioynts, with a slope cut, for avoiding of water: neither must the cut be on that side that the bud comes out of, but one the contrarie, lest with his bleeding he kill the bud. Columella appointeth two seasons for the cutting of Vines, the Spring, and the fall of the leafe, iudging in cold Countreies the cutting in the Spring to be best, and in hot Countreies where the Winters be milder, the fall of the leafe: at which time both trees and Plants, by the divine and everlasting appointment of God, yeld up their scuit and their leafe. Yet must not your sets be too nearely cut, except they be very sable: but the first yere they be set they must be holpen with often digging, and pulling off the leaves monethly, while they beare, that they may grow the better. Pamphilus in Constantine, declareth the time of cutting, or prorning, to begin in February, or March, from the fifteenth of February till the twentieth of March: some (he saith) thought good to cut them immediately after the gathering of the Grapes, lest by bleeding in the Spring they lose their sustentance: though being cut in the fall of the leafe, it springeth the sooner in the Spring.

Of Prorning.

and if the cold of frost happen to come, it is spoiled. Therefore in cold Countries, it were better to proyne it a little, then to cut it thoroughly, that is, to suffer the principall springs & branches to grow. Again, it is very necessary to cut them in the Spring: the cuts must be made with a very sharpe knife: that they may be smooth, & that the water may not stand in them, to the engendring of moulds, & corrupting of the Vine: you must cut them round, so will the cut be sooner growen out againe: but Plinie would haue them slope, wise, for the better aboyding of the water. The branches that be broad, old, crooked, or wythen, cut away, and set young and better in their place. You must make an end of your cutting with as much speed as you may: from the Ides of December, till the Ides of January, you must not touch your Vines with a knife: for Columella witnesseth, that Vines in winter may not be cut. In cutting, remember well to cut it betwixt two ioynts, for if you cut it in the ioynt, you spill it; let the cut be alwayes downward, so shall it be safe both from Sunne and weather. You must not cut them very earely, but when the Sun hath drunke vp the frost, or the dew, & warmed the branch: the springs of the sets the first yere, must be cut with good discretion, not suffered to grow too ranke, nor cut too neare, but making the olde set to suffer a spring or two to grow out. Next vnto cutting, followeth the propping, or supporting of the Vine: and it is best for the yong & tender Vine not to be stayed up with any strong stay, but with some small thing at the first, and while it is young, it must be daintily tyed to the stay with small twigs of Willow, Elm, Brome, Rushes, or Straw: this latter binding, is thought to be best, for the twigs when they ware use doe pierce and hurt the rinde.

Propping  
of Vines.

The best stays for Vines, as Plinie saith, are made of Willow, Oke, Red Juniper, Cypress, & Elder. And in another place, he preferreth the Chestnut for this purpose, above al the rest. The best for the Vine, is the Red, which well endureth five yeres. Gelding of the leaues, & cutting the Vine, is almost in one manner: the gelding of the leaues, or branches, must be done twice a yere, to the end that the superfluous springs & leaues may be plucked off. The first (as Pliny writeth) must be done within ten daies after the Ides of May, before the Vine begin to flower

Gelding  
or plucking  
off of leaues.

for

fo; about the tenth of Iune, both the Wine & the Wheate, the two noble fruits, do slowe. At the second time, the spinions are sundry, fo; some suppose it best to plucke off the leaves & branches as soone as it hath left sloweing: others, when the fruite is full ripe. The superfluous springs being yong and tender, are to be taken away, that the Wine may be more at liberty, & through blowne with the winde. This gelding, or cutting away the superfluous branches and leaves is as needfull as the propping: fo; both the fruit doth prosper the better, & the propping the next yere wil be the handsummer, & the Wine wil be the lesse full of galls: fo; that which is cut being græn & tender, doth the sooner & the soundlier recover himselfe, & the Grape ripeth the better. Ten daies befoze the Wine beginnes to slowe, see that you geld it in this sort: Cut off all the superfluous branches, both on the toppe, and on the sides, but meddle not where the clusters grow, strike off the tops of the branches fo; growing too ranke: such Grapes as grow towards the South, or the West, leave them their branches to defend them from the heate of the Sun: cut away most from the young Wine, fo; over-burdening him. After the heate of the Sunne beginneth to fade, away with the leaves, fo; hindring the Grapes of their riping: and while the Grape is a sloweing, busie your selfe with digging about it. Such Wines, as with thicke leaves corrupteth their fruit, are to be rid of their superfluous branches and leaves a moneth befoze the gathering of your Grapes, that the winde may blow the better through them: but the leaves that grow aloft in the very top, must not be medled with, but left as a defence, & shadow against the heat of the Sun: but if so be, the end of Summer be given to much raine, and that the Grapes swell in greatnesse, then hardly plucke off the leaves from the top also.

**T H A R.** One thing I pray you, let me heare more, the signes and tokens of the ripenesse: fo; as I vnderstand, we may not be too busie in gathering them too soone, nor use any lingring after they be ripe, without great harme.

**M A R I V S.** You say true: fo; being gathered befoze they be ripe, they will make but small Wine, and not durable. And againe, if you suffer them too long, you shall not onely hurt the

Wine with the ouer-long bearing of her burden, but also if hayle or frost happen to come, you put your Wine in great danger. Democritus writeth, that the Grape endureth in his ripenesse not aboue five dayes, & therefore the iudgement of his ripenesse, is not all onely to be given upon the sight, but upon his taste, though Columella thinketh there can be no certaine iudgement giuen of the taste. But if the stones doe change their colour, and be no longer greene, but be almost blacke, it is a signe the Grape is ripe. Some againe do presse the Grape betwixt their fingers, and if they see the stone to slip out smooth, without any thing cleaving to it, they thinke them meete to be gathered; but if they come out with some part of the Grape cleaving to them, they count them not to be ripe. Others probe them in this sort: Cut of a very thicke cluster they take a Grape, and as they behold the cluster well, wherein they see no change, they take it for a token of ripenesse. You must gather your Grapes, the Moone being in Cancer, Leo, Libra, Scorpius, Capricorne, or Aquari, and underneath the earth.

Thus much for the Wine in generall, now for particular experiments, as to haue it taste more pleasant then the true nature of the Grape, and to smell in the mouth odoriferouslie or as it were perfumed, you shall doe it in this manner; Take Damaskie Rose water and boyle therein the powder of Cloauer, Cinamon, three graines of Amber, and one of Muske, and when it is come to be somewhat thicke, take a round Goudge and make an hole on the maine Stocke of the Wine, full as deepe as the heart, and then put therein the Medicine, then stopping the hole with Cipresse or Juniper, lay greene ware thereupon and binde a linnen cloath about it, and the next Grapes which shall spring out of the Wine will taste as if they were perfumed.

If you will haue Grapes without stones, take your plants and plant the small ends downeward. The Wine naturally of himselfe, doth not bring forth fruit till it haue bene three yeeres planted: But if evening & morning for the first moneth you will bathe his roote with Goates milke or Cowe milke, it will beare fruit the first yeare of its planting.

You may if you please, graffe one Wine vpon another, as the  
 sweete

flowe upon the sowe; as the Muscadine Grape, or Creeke upon the Rochell, or Bourdeaux, the Spanish or Island Grape on the Gascoyne, and the Delancee upon any of all: and these compositions are the best and bring forth both the greatest and pleasantest Grapes.

If your Vine grow too ranke and thicke of leaues, so that the sappe doth wast it selfe in them, and you thereby lose the profit of the fruite, you shall then bare all the rootes of the Vine and cast away the earth, filling by the place againe with ashes and sand mingled together. But if the Vine be naturally of it selfe barraine, then with a Goudge, you shall make one hole halfe way through the maine body of the Vine, and drive into the hole a round piblestone, which although it goe straitly in; yet it may not fill up the hole, but that the sicke humor of the Vine may passe thorow thereat: then cover the roote with rich earth and ore dung mixte together, and once a day for a moneth water it with old urine, and it will make the Vine fruitful: If the Vine be troubled with wormes, Snayles Antts, Earwigs or such like, you shall morning and evening, sprinkell it over with Cowes piss and vinegar mixte together and it will helpe it\*.

Cures for  
the Vine.

**T H A R.** Is there no way to make the Grape ripe speedily?

**M A R I V S.** Plinie teacheth, to rubbe over the Rotes with tart Vinegar, and very old Wine, and thus to be often digged, and covered.

**T H R A.** What order have you for preserving of your Grapes when they be gathered?

**M A R I V S.** Some keepe them hanged up in the roole of chambers, and some in earthen pots, close covered with wooden vessels.

But if you desire (living in a colde country that is hardly capable of the Vine) to have Grapes in their best and true kinde, most early and longest lasting, you shall in the most convenient part of your Garden, which is ever the center or middle point thereof, build a round house in the fashion of a round Douecoate, but much lower: the ground whereof shall be above the ground two or three Bricks thickness, upon this ground plot you shall place a groundsell, and thereon sowe yet strong

Strong studds which may reach to the roofe; these studds shall be placed better then foure foote one from another, with little square barres of wood, such as you vse in Glasse windowes, two betwixt every two studds. The rooffe you may make in what proportion you will; for this house may serue for a delicate Banqueting house, and you may either couer it with Leade, Slate or Tyle. Now from the ground to the top betweene the studds you shall glasse it with very strong Glasse, made in an exceeding large square pane, well leaded and Cimented; This house thus made, you shall obserue that through the Brickwork there be made, betwixt every two studds, square holes cleane through into the house. Then on the out side opposite against those holes, you shall plant the Rote of your Vine hauing beene very carefull in the election and choyce thereof; which doone, as your Vine groweth, so you shall draw it through those holes, and as you vse to plash a Vine against a walle, so you shall plash this against the Glasse window on the inside, and so soone as it shall begin to beare Grapes, you shall be sure to turne every Bunch, so that it may lie close to the glasse, that the reflection of the Sunne heating the glasse, that heate may hasten on the ripenning and increase the growth of your Grapes, as also the house defending of all manner of euill weather, these Grapes will hang ripe vntrotted or withered euen till Christmas. This experiment hath beene approued in England and found most excellent\*.

THRA. I pray you procede with the other fruit Trees of your Orchard.

The Olive.

MARIVS. Among other fruit trees next vnto the Vine (as Columella saith) the chiefe place is giuen to the Olive, in Latine Olea. Of all other Plants it requireth least trouble and charges, where as the Vine requireth most: and though it beare not every yere, but every other yere, yet is he to be borne withall, because he asketh neither cost nor labour: and if you bestow any vpon him, he recompenseth it thoroughly, with the abundance of his fruite. And since there is so great profite and commoditie in this Tree, and that the uses of it are so many, and so needefull, it is good reason to be diligent and carefull about it: he loveth



a ground neither too high, nor too low, but rather the side of a hill, such as is the most part of Italie and Spaine: for in such ground the extreame heate of the Sunne, is something mollified with the cold blasts of the winde: for in Olive trees (as Plinie saith) the soyle and the clime is of great importance: it delighteth in a warme, and drie ayre; and therefore in Barbary, Sicil, Andalusia, sundry parts of Italie, specially Campania, it prospereth wonderfully: it liketh not too great heat, nor too much cold. And therefore in hot Countries, it sojourneth upon the North side of the hilles, and in cold, upon the South side. It is thought, that if it stand above thre score miles from the Sea, that it either dyeth, or groweth not fruitfull. The best ground is the gravelly ground; having aloft a little chalke mingled with sand: it is also good ground where the sand or gravell is medled with rich mould: yea, the stiffe ground, if it be rich and lively, doth very well agree with this tree. Chalkie ground is utterly to be refused, and watry and marsh ground worst of all. The like is a barraine sand, and hungry sand: but you may set it well in Coyne ground, where either the Wilding or Pasthelme hath growne: but betwixt the Dake and it there is great hatred; for if the Dake groweth nere, it flyeth away, and sinketh towards the earth: and though you cut downe the Dake, yet the very rootes poysoneth and killeth the poore Olive. The like some affirme of the trees called Cerrus, & Esculus: for where they be pulled up, if you set the Olive, he dieth: so doth it (as Plinie saith) if it chance to be bruised of the Goate. On the other side, betwixt the Olive & the Vine there is great friendship & love: and it is said, that if you graffe the Olive upon the Vine, it will beare a fruite that shall be halfe Grape, and halfe Olive, called Vuolea, an Olive-Grape. There are sundry waies of planting of Olives: some take the biggest branches from the Trees, and sawing off the youngest plants of two cubits in length, they set them orderly in the ground: some setteth the whole Tree together: some againe cutting off the tops, and all the branches, set the stocke about the rising of the Starre Arcturus. Many make them Impe Gardens in good ground and mellow, such as is commonly the blacks mould: herein they set the young branches



branches the lowest, & the sayest, two or thre inches in thicknes, & very fertill, which they gather not from the body of the tree, but from the newest and latest boughes. These they cut into pretty peeces of a fote and a halfe in length, taking good heed that they hurt not the rinde, and pacing the ends very smooth with a sharpe knife, and marking them with redde Wker, that they may know which way they stood afore, and so setting the lowest part into the ground & the highest towards thy heauen, they put them in the ground, and so they grow the faster, and beare the better: so; if you should set them with the lower end upward, they would either hardly grow, or growe vnfruitfull: and therefore they haue a regard of the setting of them. You must beside, before you set them, rubbe ouer both the toppe and the fote with dung mingled with Ashes, and so set them deepe in the ground, covering them foure fingers thicke with rotten mould. You may choose whether you will set them all under the ground, or set some part within the ground, and suffer the rest to appeare aboue the ground: those that be sette all within the ground, neede not to be marked, but such as shall stand with one part aboue the ground. Dydimus would haue them so set as they may appeare foure fingers aboue the ground, & then to make a little trench so; the receiuing of the water: and this manner of planting with the boughs, is of Dydimus best liked. Where you meane to plant, you must purge the ground of all other plants, bushes and weedes: & the trenches must so be made, as with the winde, the sunne & raine, it may be mellowed; made croumbing, that the plants may the sooner take roote. If your businesse require haste, you must a moneth or two before, burne in the trenches either sticks or reede, or such things as will easily take fire: and this you must doe diuers dayes together. Your trenches must be thre cubits, or thereabout in depth, and 40. cubits asunder, whereby the trees may haue ayre enough: the first, second, and the thirde yeere, the earth must be trimmed with often raking: the first two yeers you must not meddle with proping: the thirde yeere, you must leaue upon every one a couple of branches, & often rake your Impegarden: the fourth yeere, you shall of the two branches cut away the weaker: being thus ordered, in the fift yeere they will be meet to be rambred: the stocks that is

as big as a mans arme, is best to be removed: let it stand but a little above the ground, so shall it prosper the better. Before you remove it, marke the part that stood South with a pece of Oker, that you may set it in like maner againe. You must first dig the trenched ground with Hattocks, & after turne in stone, plowed earth, and sow it with Barley: if there be any water standing in them, you must let it out, and cast in a few small stones, and so setting your Setts, cast in a little dung. After the tenth of June, when the ground gapes with the heate of the Sun, you must take hede that the Sun pierce not through the clefts to the roote. From the entring of the Sun into Libra, you must ride the rotes of all superfluous springs: and if the Tree grow upon the edge of a hill, you must with little gutters draw away the muddy water. The dung must be cast on at the fall of the leafe, that being mingled in Winter with the mould, it may keepe the rotes of the trees warme. The mother of Oyle must be powdered upon the great ones, & the molle must be cut off with an Iron Instrument, or else it will yield you no fruit. Also after certaine yeeres, you must cut and loppe your Olive trees: for it is an old proverbe, That who so ploweth his Olive Garden, craveth fruit: who dungeth it, moloweth fruit: who cutteth the trees, forceth fruit. In the Olive Tree you shall sometime have one branch more gallant then his fellowes, which if you cut not away, you discourage all the rest. The Olive is also grafted in the wilde Olive, specially betwixt the rinde and the wood, and by implastring: others graffe it in the roote, and when it hath taken, they pull up a parcell of the roote withall, and remove it as they doe other plants. Those Olives that have the thickest barks are grafted in the barke. The time of Grafting them, is from the entring of the Sunne into Aries, and with some from the xxi. of May, till the first of June. The time of gathering of Olives, is when the greater part or halfe the fruit waxeth black, and in faire weather: the riper the Olive is, the satter will be the Oyle. In gathering of Olives, there is more cunning in making Oyle, then in making Wine: the lesser Olives serve for Oyle, the greater for meate. There is sundry sorts of Oyle made of an Olive: the first of all is raw, & pleasantest in tast: the first streame that comes from the presse is best, & so in order.

**T H R A.** Go on then, and let vs heare what you can say of Apple trees: whose use is more commonly knowne unto vs.

**M A R I V S.** There are such sundry sorts of Apples, differing both in shape and saour, as are scarcely to be numbred.

We haue at this day that are chiefe in price, the Pippen, the Monck, the Pomeroyall, the Parigold, with a great number of others that were too long too speake of.

Apple trees are set either in Februarie, or in March or if the Countrey be hot and dry, in October and November. But all kindes of Apples doe better prosper by grafting, & inoculation, or imbudging, as I said before, about March or Aprill, or what time so euer the sap be in the rinde. They are also grafted by implastring, about the tenth of June: though some (as they say) haue had good successe in doing it after the entrance of the Sun into Aries, as I haue said before, where I spake of implastring and Grafting The Apple is commonly Grafted upon the Crab stocke, or upon the Bramble, being first planted, and the yere after cut off within a fote of the earth: upon this stocke you may Graft (as I said) the tender young Graftes of any Apples. Palladius saith, you may graffe the Apple upon the Betrie, the Hawthorne, Plumbe tree, Seruissie tree. Peach, Plane tree, Poplar, Willow, and Pearre: but in such diversity of Countreies, we can set downe no certaine order for them all: and therefore as farre as mine owne experience, and the knowledge that I haue learned of others will stretch, I will gladly shew you. There are that according to the olde order, doe graffe the Apple either upon a wilde Berry, or upon a Quince, wherof they haue a most excellent fruite, called of the olde Writers Melimela. If you Graft upon the Plane tree, you shall haue a red fruite: you may also well Graft your Apple upon the Damson tree, and if you Graft upon the Cytron, you shall haue them beare, as Diophanes saith, fruite almost all the yere long.

But aboue all to graft the Apple upon the Apple is the best, for the best stocke euer bringeth forth the best fruite.

The Apple loneth a fat, and a good ground, well waeterd rather by nature, then by industrie. In mountaine Countreies they must alwayes be set toward the South: it prospereth well enough, so it be something holpen with the Sunne, neither doe they

they refuse either rough or marish grounds. A leane and a barren soyle bringeth out worme-eaten, and falling fruit: the noysome Wormes are destroyed with Hogges dung, mingled with mans urine, and powred upon the rootes. And if the tree be very full of Wormes, being scraped downe with a brasse scraper, they never come againe, if the place whence you scraped them, be rubbed ouer with Bullocks dung: some adde vnto urine Coates dung, and powre upon the rootes the Lees of old wine. The tree that is sicke, or prospereth not, is holpen being watered with Asse dung, & water sixe dayes: they must be often watered at the setting of the Sunne, till the Spring be come out. Pliny writeth, that the water wherein Lupines hath bene sod powred upon the tree, both the fruit good. They say, if the tree be much watered with urine, the fruit will be red. Others againe set under their trees Roses, thinking thereby to have their Apples red. Apple trees (as I said before) must be set every foot by themselves, as Columella biddeth, least the small trees be hurt of the great, because they be not all of one growth, or strength. Beside, you must set them very thin, that they may have room to shoot out their branches: for if you set them thick, they will neuer beare well, and therefore you must set them sixty, or at the least thirty foot a sinder: The Apple declareth his ripenes by the blacknes of his kernels.

Against  
hurtfull  
wormes.

For their gathering, you shall understand that the Sommer fruit is first to be gathered, whose ripenes you may partly know by the change of the colour, partly by the pecking of Birds, but chiefly by the smell: when they are ripe you shall rather gather them with the hand then beate them downe with poles. There be some that goe up into the Tree, or have a tall ladder with a backe stay, that the ladder may not hurt the tender Branches, and having a Basket with a long line fastened thereunto, as soone as it is filled, let it downe to be emptied gently into the greater vessels: & in this gathering you made not respect the state of the Moon, or such like ceremonies. But when you come to gather your winter fruit which are Peppins, Pear-mains, Russetings, the black Apples & such like, you shall in any wise gather them in the wane of the Moon & in a wyleson, & if it be so that your store be so great that you cannot gather

CO

all

get time, eight or nine dayes; and being ordered in this wise they shall neither (they say) be rotten, or woome eaten.

There are diuers and sundrie uses of timber: such as are barraine, are better then the fruitfull, excepting those sorts where the male beareth, as the Cipresse, and the Cornell: in all trees the parts that grow toward the North, are harder, and sounder, which are almost covered with mosse, as with a cloake against the colde: the woods are those that grow in shadowie and watrish places, the massier and better du- ring, are they that grow against the sunne: and therefore Theophrastus divideth all Timber into thre sorts, into clo- ven, squared, and round, of which the cloven do never rent nor coame: for the pith being bared, dieth up and dieth: they also endure long, because they have little moisture. The squared, and the round, or the whole timber, doth coame and gape, specially the round, because it is fuller of pith, and therefore renteth and coameth in every place. And such high Trees as they use for pillars and maine postes, they first rub over with Bullockes dung to season them, and to sucke out the sappe: for the moisture doth alwayes coame sooner then the dry, and dry better to be sawne then the green, except the Wake, and the Wore, that doe more fill the teeth of the sawe, and resist it. Some againe refuse to be glued either with themselves, or any other, as the Wake, which cleaveth as soone to a stone, as any wood, neither doe they well cleave, but to such as are of like nature: to be bored, the graine is wooser then the dry: the light and the dry, are harder to be cut: for Bandes and Withes, the Willow, the Wicome, the Wyck, the Elm, the Poplar, the Vine, the clo- ven Beech, the Bramble are best: the Hasell will also serue, but the first is the Willow: they have also a certaine hard- nesse and saitenesse, mete to be used in graven workes. Among those that serue for timber, are most in use the Firre, the Wake, the Vine, the Larch, the Elm, the Willow, Cedar, Cy- press, the Box, Wyck, Plane tree, Alder, Ashe, wilde Wake, Date tree, Beech, wilde Olive, Pistholme, Walnut; Maple, & Holly, and diuers others, used according to their nature, and

The Firre. The manner of the Countrey where they grow. The Firre tree,

tree, whereof I have spoken before, giueth out Rozen, and his Timber is meet for diuers woorkes, and greatly esteemed for his height & bignesse, whereof are made the Ship Pasts, & Pillers for houses: for it is very strong, & able to abide great force. It is used also in building, for great Gates, & Doore posts: in fine, good for any building within, but not so wel enduring without doores & very soone set a fire. They used (as Theophrastus saith) in the olde time to make their Gallies & long Boates of Firre, for the lightnesse sake, & their Ships for burden, of Pine tree, & Oake. I have spoken a little before, the timber whereof is best, both for inward buildings, & for the weather, & also well enduring in the water: Hesiodus would haue poakes make of Oke. The wilde Oke serueth also well in water woorkes, so it bee not nere the sea: for there it endureth not, by reason of the saltnesse: it will not be pierced with any Augur, except it be wet before: neither so will it suffer (as Piny saith) any Paile driuen in it, to be plucked out againe.

The Elm is used for weather boards, and water woorkes to make plankis for low most vaults, for Rytchin Tables or Butchers Stalls, for Paines of wheeles and Areltrees or any use of toughnesse. The Ash (as Theophrastus saith) is of two sorts, the one tall, strong, white, and without knots, the other more full of Sap, ruggedder and harder.

The use of  
the Elm.

It is the onely Timber of all other for Ploughes, for ordinarie Areltrees, the rounds of Wheeles, Harrow Bulls, Coaches and the like, also the Ashe, besides his manifold use o- ther wayes, maketh the best and fairest hozsemens staves and Pikes, whereof was made the staffe of Achilles, which Homer so greatly commendeth: it is also cut out in thynne bozdes.

The use of the  
A she.

The Beech, whereof I have spoken before, although it be brittle and tender, and may be so cut in thin bozdes, and bent, as he seemeth to serue onely for Caskets, Boxes, and Coffers: his colour being very faire, yet is he sure and trustie in bearing of weight, as in Areltrees, for Carts or Waines. The barke of the Beech, was used in olde time for vessels together Grapes in, and other fruite, and also for Cruets, and vessels to doe sacrifice withall: and therefore Curius Sware, that he brought nothing away of all the spoile of his enemies, but one peece

The Beech.

**Barthen Cruet**, wherein he might sacrifice to his gods.

**The Alder.** The Alder is a Tree with straight bodie, a soft and reddish wood, growing commonly in the watry places; it is chiefly esteemed for foundations, and in water workes, because it never rotteth lying in the water: and therefore it is greatly accounted of among the Venetians, for the foundations of their palaces, & houses: for being driven thicke is piles, it endureth for ever, and susteineth a wonderfull weight. The rinde is pulled off in the Spring, and serueth the Diar in his occupation: it hath like knots to the Cedar, to be cut and wrought in.

**The Plane-tree.** The Plane tree is but a stranger, and a new come to Italie, brought thither only for the commoditie of the shadow, keeping off the Sunne in Sommer, and letting it in, in Winter. There are some in Athens (as Pliny saith) whose branches are 36. cubits in breadth: in Licya there is one for greatnesse like a house, the shadow place underneath containing 81. fote in bignesse: the timber with his softnesse hath his use but in water, as the Alder, but drier then the Elm, the Ashe, the Spulbery and the Cherry.

**The Linder** The Linder Theophrastus counteth best for the workman, by reason of his softnesse: it breedeth no wormes, and hath betwixt the Barke and the Wood, sundry little rindes, wherof they were wont in Plinies time to make Ropes and Cables.

**The Birch.** The Birch is very beautifull and faire: the inner rinde of the tree, called in Latine Liber, was used in old time in stead of Paper to write upon, and was bound vp in volumes; whereof bookes had first the name of Libri: the twigs & bowes be small, and bending used to be carried before the Magistrate among the Romanes, at this day terrible to poye boyes in Scholes.

**The Elder.** The Elder tree, doth of all other trees soonest and easiliest grow, as experience teacheth vs, and though it bee very full of pith, yet the wood is strong and good: it is hollowed to diuers uses, and very light staves are made of it. It is strong and tough when it is drye, and being laid in water, the rinde commeth off as soone as he is drye. The Elder wood is very hard and strong, and chiefly used for Boare speares, the roote (as Plinie saith) may be made in thin boozdes.

**The Figge tree** The Figge tree is a tree very well known and fruitfull, not very



very high, but somewhat thicke (as Theophrastus saith) a cubite in compasse, the Tymber is strong, and used for many purposes; and sith it is soft, and holdeth fast whatsoeuer stiches in it, it is greatly used in Targets.

Boxe  
Wore træ, is an excellent Træ, and for his long lasting, to bee preferred before others: it is of especiall use amongst Turners, Combe-makers, and Mathematicall Instrument makers.

Juniper.  
Juniper dzibeth away vermine: for with his labour, Loads and Snailles, and such like, are dziben away: it is very like to Cedar, but that it is not so large, nor so high, though in many places it groweth to a great height: the Timber whereof well endureth a hundreth yeres. And therefore Hannibal commanded that the Temple of Diana should be built with rasters and beames of Juniper, to the end it might continue. It also keepeth fire a long time, in so much as it is said, the coales of Juniper kindled, have kept fire a yere together: the Gum whereof our Painters use.

The Cedar træ, the hardnes of this timber is only praised, & that it will never rot, nor be worime eaten, but continue ever. Salomon built that noble Temple of God, at Jerusalem, of Cedar: It is very meet for the building of Pallaces & Castles: the Cedar, the Eben, & the Olive træ, do never chinke nor coame. Images of Gods & Saints were alwayes made of Cedar, because it ever yeldeth a moisture, as though it sweat. Theophrastus writeth of Cedars in Syria, of foure elles & more in compasse. The Cypressse, & the Pine, do endure a long time without either worim or rotting.

The Pine.  
Pliny comendeth Gates of 400. old. The Pine (saith Theophrastus) is of a great strength, & very meet for the straightnes & handsonnesse, to bee employed in building. The Walnut træ is a great træ, & commonly knowne, whose Timber is much used in selings, & tables. Theophrastus writeth, that the Walnut træ be, soe it falleth, maketh a certaine kinde of noyse, which it once happened in Antandro, the people being greatly afraid, fled so, vainly out of the Bathes. The wild Olive, of his wood is made shafts & handels of wimbles & augurs. Veme, or Holly, is a træ whose leaves are full of prickles, round about the leafe, and the barke, being both continually greene, the berries like the Cedar:

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of the kinde and rootes they make Birdlime: the Wood is very hard, the branches will well winde and bowe, and therefore serueth excellent well for quickset hedges.

**The Maple** The Maple, for the beautie of the wood is next to the Cedar, having a very saye and pleasant graine, of the resemblance called Deercokes taile: with this wood Tables are covered most gorgeous to the eyes, and other fine workes made.

**The Date** The Date tree, whereof we have spoken before, hath a very soft wood.

**The Corke** The Corke, his timber is tough. If you will chuse Timber for Stoules, Chayres, Chests, Desks and the like, then you shall chuse the best Deere tree, for it is most smooth, sweete and delicate, and though it be a very soft wood, yet in any of these frames it is an exceeding long laster and the heart thereof will never breed worme, nor will it in any time lose the colour.

**Vse of Pear-trees.** If you will chuse Timber for Trenchers, Dishes, Bowles, Traves or any Turners ware, or for any Inlaying worke, you shall then make choyce of the fairest and soundest Maple being smooth and vnknotted, for it is the plainest graine & the whitest of all other; and although either the Beech or the Poplar will reasonably wel serue for these purposes, yet the Maple is chiefly to be preferred: for fire, and light, are used the Firre, the Pitch tree, and the Pine.

**Vse of the Maple, Beech and poplar.** The best coales are made of the fastest wood, and the Oake, and the wilde Oake: but the finers rather desire the coales that are made of Pine tree, because they better abide the blowing, and die not so fast as the other. The Cerre tree, though the Tymber be of no great vse, yet serueth it well to make Coale of for the Brasle forges, because as soone as the Bellowes leaues, the fire ceaseth, and there is little waik in it: but for building, the Timber thereof is altogether unprofitable, because it doth easily breake, and moulder away: but being in postes unhewed, it serueth well enough within doore. The aptest to take fire, is the Fig tree, and the Olive tree. The Fig tree because it is soft and open: the Olive tree, for the fastnesse and the fatnesse. The Larch tree (as Vitruvius saith) resisteth the fire, though Machiolus (as I said before) goeth about to disprove it.

This

This is the opinion of the Ancients, but we finde by experience, that Oake, Elme and Ashe make your longest and best induring Coales. The Birch the finest and brightest Coale, and the Birch or Sallow the swiftest burning Coale. Now for your small Coale, the twigges of the Birch makes that which kindles swiftest, and the white thorne that which induces the longest; and the roots and hard knots of any before spoken of, makes the best Brands. In all the bodie of trees, as of lively creatures, there is skin, sinewes, blood, flesh, veines, bones, & marrow: their skin is their barke, of great use among Country people: the vessels that they gather their Wines, & other fruits in, they make of the barke of Linde tree, Firre, Willow, Birch, & Alder. The Cork hath the thickest barke, which though he lose, he dieth not, so; so beneficiall hath nature bene to him, that because he is commonly spoiled of his barke, she hath given him two barks. Of his barke, are made Pantofles & Slippers, & floates for fishing Nets, & Angles: if the barke be pulled off, the wood sinks: but the barke alwayes swimmeth. The next to the rinde in most trees, is the fat, the softest and the worst part of the tree, and most subiect to wormes: therefore it is commonly cut away. The sappe of the tree, is the blood, which is not alike in all trees, for in the figge tree it is milkie, which serueth as a Rennet for Cheese. In Cherie trees, it is gummy: in Elmes, saltish: in Apple trees, clammy and fat: in Wines, and Pearre trees watrish: they commonly spring the best, whose Sappe is clammyest. The iuice of the Pulberie, is sought for (as Plinie saith) of the Physicians. Next to the fat, is the flesh, and next to that the bone, the best part of the timber: all trees have not any great quantitie of this fat and flesh, for the Bore, the Cornell, and the Olive, have neither fat, nor flesh, nor marrow, and very little blood: as neither the Seruise, and Alder, have any bone, but both of them full of marrow. Kedes for the most part have no flesh at all: in flesh of trees, there are both veines and arteries, the veines are broader, and fairer: the arteries, are only in such trees as will cleave, by means of which arteries it cometh to passe, that the one end of a long beame laied to your eare, if you do but fillip with your finger upon the other end, the sound is brought forth with your eare, whereby it is knowne, whether

The barke.

ther the peece be straight and even or not. In some trées there are knots on the outside, as the wenne, or the kernell in the flesh of man, in the which there is neither veine, nor arterie, a hard knop of flesh being clong, and rolled up in it selfe: these are most of price in the Cedar, and the Maple. In some, the flesh is quite without veines, having only certaine small strings, and such are thought to cleave best: others, that have not their strings, or arteries, will rather breake then cleave: as the Wine, and the Olive, will rather breake then cleave. The whole body of the Fig is fleshy: as the body of the Pistholme, the Cornell, the wilde Dake, the Pulbery, and such others as have no pith, is all bony. The graine that runneth overthwart in the Wæch, was (as Pliny sayth) in the old time for his arteries.

THRA. There are other commodities beside the timber to be gathered of these trées.

MARIVS. Very true: (for as I said before) of the Medlar, the Oke, the Chestnut, the Pine, and the Wæch, these trées that grow in the Woods, besides their timber, beare fruit also good and meete to be eaten. So of the Firres, the Witch trées, and the Pines, we gather Rozen and Witch, to our great commoditie & gaine: as of the Oke, the Wæch, the Chestnut, the Medlar, and the Pine, we have fruite both meet for man, and also good for feeding of Hogs, and other Cattle. In time of dearth, both our forefathers, and we, have tried the good service that Acornes in bread hath done, yea, as Pliny & others have written, they were wont to be served in amongst fruit at mens tables. Neither is it unknowne what great gaines some countries get by Acornes Rozen and Witch: The Gall also groweth upon these Acorn-bearing Trées, whereof I have spoken before. Amongst all the trées out of which runneth Rozen, the Tarre trée, a kinde of Pine, is fullest of sap, and softer then the Witch, both meet for fire, and light, whose bozdes we use to burne in stead of candels. The Cedar sweateth out Rozen and Witch, called Cedria. Moreover, of Trées, is Birdlime made, the best of the Certe trée, the Pistholme, and the Chestnut, specially in the Woods about Sene, and nere the Sea side, where they are carefully planted in great plentie, by the Birdlime-makers: For they gather the berries from the trées, and boyle them til they break,  
and

and after they have stamped them, they wash them in water, till all the flesh fall away. Pliny affirmeth, that it groweth onely upon Oakes, Hawthorne, Shaddes, Pine trees, and Firre. Birdlime is also made of the rotes of certaine Trees, specially of the Holly, whose rotes and barkes withall they gather, and lay them up in trenches, covered with leaves in a very moist ground (some doe it in dung) and there they let them lie till they rot, then take they them out, and beate them, till they ware clammy, and after wash them in warme water, & make them up in balles with their hands: it is used (beside other purposes) for the taking of Birds. Besides all this, there sweateth out of Trees a certaine Gumme knowne to all men, as of the Cherry tree, the Plome tree, the Juniper, the Olive, the Blackthorne, the Aune, and Almond. Out of the Juniper, commeth vernish: out of the Pirthe, Storax: out of the white Poplar, Amber. Plinie writeth, that Amber commeth out of certaine Pine trees in the sat, as a Gumme doth from the Cherrie tree. And thus these things that I have here at your request declared, touching the order of Planting and sowing, I beseech you take in good worth.

Soli Deo laus & gloria, per  
Christum Iesum;

*The end of the second Booke.*



## The third Booke:

### Of Feeding, Breeding, and Curing. of CATTELL.

HIPOCONVS, EVPHORBVS, HEDIO, EYMAEV S.



That the breeding and feeding of Cattell is a part of Husbandry, and nere joyned in kindred to the ticulture of the ground, not only appeareth by Virgill, the Prince of Poets, who hath in his Georgickes thoroughly set forth the order thereof, but also by the witnesse of the more ancient Philosophers, Xenophon, and Aristotle. The like doth our common experience at home daily teach vs: for albeit the trade of Tillage and keeping of Cattell is diuers, and the manner of occuppying many times contrary the one to the other: as where the Grasser & Breeder, requireth a ground full of Grasse and Pasture, the Husbandman on the other side, a ground without Grasse, & well tilled: yet in these their diuers desires, there appeareth a certaine fellowship and mutuall communitie redounding in their occuppying of one the other, which Fundavius in Varro, doth seme by an apt comparison to proue: as in a couple of Shalmes, or Recorders, saith he, the one differeth in sound from the other, though the musicke and song be all one (the one sounding the Treble, the other the Base) in like manner may we terme the Grassers trade the treble, and the tillers occupation

occupation the base, following Dicearchos, who reporteth, that  
 at the beginning, men lived onely by husbanding and feeding of  
 Cattell, not having as yet the skill of plowing and tilling the  
 ground, nor planting of trees. Afterwards in the lower degree,  
 was found out the manner of tilling of the ground, and there-  
 fore beareth the base to the fader, in that it is lower; as in a  
 couple of Recorders, the base to the treble: both asling to keep  
 cattell for plowing, cartage, dunging of our ground and other  
 commodities: and on the other side, to till the ground for feeding  
 and maintenance of our cattell, if comes to passe, that though  
 the manner of occupying in tillage, and keeping of cattell be  
 divers, yet one of them is as much the enemy of the other, that as  
 it seemeth, they cannot well be a hinder; for without the ser-  
 vice of Horse and Oxen, we can neither plow nor dung our  
 ground. Chaffe, straw, and other offall of corne is matter to be  
 spent upon the ground, then to be sold, both for the Farmers  
 behofe, and the Lords, and better bestowed upon the household  
 cattell, then upon the foreigners. Besides, the dung of the cattell  
 enricheth the ground, and bringeth great increase: and whereas  
 there is no place (as Columella saith) but in the tillage of the  
 ground, they have as much made of cattell, as men: the cattell  
 feedeth directly for tilling of the ground, but also to bring in  
 corne, to beare and beare, carrying the ground, also for dung  
 and increase of the ground: whereby they have their name  
 Iumenta, of helping, because they help and further us either in  
 our labours, by plowing or beathing: neither is it out of our mind  
 to nourish and bring up the name of good cattell called Tu-  
 mena, beasles the other kind of beasts, as Swine, as Goats,  
 Goats, Goats: and of fowles, Cocks, Hens, Ducks,  
 Pigeons, Pheasants, Chickens, and other fowles, and things  
 belonging to husbandry, where with the good husband and  
 his wife take care to make great gains: and they grow more  
 for it, there ariseth oftentimes a great profit, as in the raising of  
 Corne, and that with smaller charges. For a pecke that se-  
 ding is gainfull, the words Pecunia, money and Peculium, sub-  
 stant, or riches, being both derived from the Latine name of  
 cattell, may very well seeme: for in the old time they used their  
 cattell instead of money, and their common language called  
 taken



Sene, for the Droppe with Spurge, or Agaricke: for cleansing of the  
 blond, with Fumitory, or Hoppes: and if you will but onely lose  
 the belly, with Mercury, or Gallowes: so saith Cardanus. Our  
 countrymen doe chiefly commend for milke, the Pastures  
 where groweth Sperey, and Claver-grasse, & that is all bedeckt  
 with yellow flowers. For the Cattell, the difference is betwixt  
 the sicke and the healthie, the young, and the olde: and for the  
 milke, that is best that is not long kept after the milking; nor  
 that is milked immediately upon the Calving, a grosse un-  
 wholesome kinde of Milke. To trie whether Milke be mingled  
 or not, you shall take a sharpe Rush, & putting it into the Milke,  
 let it drop from thence upon your Paile, and if the drop runne  
 abroad, it is a signe there is water in it: if it kepe together, it  
 shewes it to be pure and good. Of Milke is made Butter, whose  
 use (though it be chiefly at this day among the Flemings) is  
 yet a good and profitable sode in other Countries, and much  
 used of our olde Fathers, yea even of the very Patriarches (as  
 the Scriptures witnesseth.) The commoditie thereof, besides  
 many other, is the allwaging of hunger, and the preserving of  
 strength: it is made in this sort. The Milke, as soone as it is  
 milked, is put out of the Paile into Bowles, or Pannes, the  
 best are earthen Pannes, and those rather broad then deepe: this  
 done, the second, or the third day, the cream that swimmes a-  
 float is skated off, & put into a vessell rather deepe then big, round  
 and Cilinder fashion: although in some places, they have other  
 kinde of Charmes, low and flat, wherein with often beating &  
 moving up and downe, they so shake the Milke, as they sever the  
 thinnest part off from the thicke, which at the first, gathers to-  
 gether in little crombles, and after with the continuance of the  
 violent moving, commeth to a whole wedge, or cake: thus it is  
 taken out, and either eaten fresh, or barrellled with salt. The  
 Buttermilke that remaineth of the Butter, is eyther kept for  
 the family, or given to Calves and Doggs, as a dainty food.  
 Cheese is also made of the Milke of Cattell, the Milke being  
 powred into a Vessel of earth, putting into it a little rennet, the  
 quantity of a Walnut, in a great vessell of Milke, whereby it  
 runneth into Curds. Varro doth better like the Rennet of the  
 Leutet, or the Kid, then the Lambes: howbeit, we commonly  
 use

Butter.

Cheese.

use the Calues Kernet : others use sundrie other meanes, onely with heate, warming it in Tinne vessels, and after dipping those Vessels in cold water, which is the sweetest and cleanliest manner : others put in the seeds of wilde Muston, and being so turned, the Walley doth greatly purge steame : others againe use the Milke of the fig tree, and then doth the Walley purge both choler and steame : some purge it with Drimell, or Syrope of Vineger, which is of all other wayes the wholesomest : some besides, use the little skinne of Birds Gulsards, and others, the stowyes of wilde Thistles, or Partichokes. The newer and better the Milke is, the better will be the Cheese : so made of two sorts of Milke, or Milke that is too more skated, it sowereth, and wareth hard and naught, and is not to endure any while. Again, being made of fat and new Milke, it will very long endure, and long continueth in his fatnesse and softnesse : about a two or thre houres after you have put in your Kernet, the Milke cometh to a Curd, which is straight wayes put into formes, or Cheesefats, and pressed : or if they be but small, they are onely pressed with the hand. If they be of any quantity, they have great waight upon them : it is very needfull you presse out the Walley with as much speed as you can, and to sever it from the Curd, and not to let it lye slowly drayning of it selfe. Those that make great Cheeses, have moulds for the purpose, and Waights and Presses answerable. After this, they take them out of the Presse, and lay them upon Herdels, or faire smoothe Tables, in a shadowie and a cold place, and close from all windes, sprinkling them all over with salt, that they may sweate out all their sowrenesse, laying them so, as they touch not one the other. When they be now well hardened and thickened, they are taken up, and pressed againe, with great weights, and rubbed over with parched salt, and after layd in presse againe, whereby it is thought they will neither have eyes, nor be over drye : which faults hapneth to come when they be either not well pressed, or too much salted. Some use to put into the bottome of their Walles, the greene kernels of the Wine Apple, and milking into them, doe cause it so to turne. You may also cause your Cheese to relish of whatsoever you will, as Pepper or any other Spice : but Columella counts that for the best Cheese,

Cheese, that hath least mixture in it. The strongest Cheese, and hardest of digestion, are those that are made of Buffes milke: the next are such as are made of the milke of Ewes, but the mildest, and lightest of digestion, are those that are made of Goates milke: the Cheese that is made of Pares milke, is of the same qualitie that the Buffes Cheese is. There is Cheese also made of Cammels milke, and of Asses milke: the Cheeses that are made of Buffes milke, are at Rome, of all other cattell in greatest estimation. Such as are touched both above and beneath, and have more then foure Pappes, you can make no Cheese of their milke, for it will never Curd. In our daies, the best Cheeses are counted the Parmasines, made about the River of Po, esteemed for their greatnesse, and daintinesse, of which you shall have brought into other countries that weigh above threescore pound. Next are commended the Holland Cheese, the Cheese of Normandie, and the English Cheese. In England the best Cheese is the Cheshire, and the Shropshire, then the Banbury Cheese, next the Suffolke, and the Essex Cheese, and the very worst the Kentish Cheese.

Of the whey which commeth from the Cheese is made certaine Curds which are called Whey Curds, & are made in this manner. They put the Whey into a Brass Kettle or Pan and set it over a soft fire, heating it till the fatnesse of the Cheese swimme aloft, then with a Dish they put new milke into the Whey, and presentlie you shall see the Curds swim aloft upon the Whey, which with a Skimmer you shall take and put into a cleane vessell, and so doe as long as you see the Curds arise, then when they cease, put in more new Milke and more Curds will arise, and thus do till the strength of the Whey be spent. The old writers do teach the making of a kinde of white meat, not much unlike to Melcurds, which they called Melcan, & made it in this sort. They put into a new earthen vessell Vineger, and suffered it to boyle softly upon the fire, till the vessell had drunk up the Vineger, and into that vessell they powred in Milke, and set it where it might stand stedfast, where by they had within a while their desire. But me thinketh I have spoken enough of this subiect, I will now proceed to the nature & ordering of Swine which that it is a notable Creature belonging to husbandry, doth evidently

Melcan,

Swine,

evidently appeare by the saying of  $\S$  ancient husbands, counting him a slothfull & an unthriftie husband, that hath his Bacon rather from the Butcher, then fro his own Wife: for there ariseth as great profit many times to us of our own Swine, as doth to you that be keepers of greatestt cattel of your flocks: for if Bacon be away, the chiefeft supporter of the Husbandmans kitchen is wanting. And whereas Swines flesh seemeth abhominable to  $\S$  swolish Iewes, I beleue verily they never tasted the Camonds of France, so highly comended by Varro, Strabo, Athenus and other learned writers: which I suppose were none other but the Nitches of Terephaly, so greatly esteemed at this day, not onely in Germany, but in Rome, & that they were called by the names of Celtick Camonds, because the old writers, especially  $\S$  Græks called all Countries on this side the Alpes, both French and Dutch, by the name of Celtick. Surely there is no beast besides that makes more painty dishes, there is in him nere fiftie different tastes, where every other beast hath but one, & heretof came at the first the sharpe law of the Censors, forbidding it to be used at suppers, the Adders, the Stones, the Tripes, and the forepart of the heads of Swine, (as Plinie witnesseth.) And most apparent it is, that not only the French, & the Dutch in those daies, but also the Italians, and the Græks, nourished great heards of Swine. Among the Græks, Homer maketh mention of one, that had twelue Hogstyes, every stye containing fiftie Dorkings, & Polybius writeth, of more then a thousand to be ready at a time among the ancient Italians, Tuskans, & French. Varro accounteth a hundzed but a smal heard. Who so will nourish hogs, must have regard both to the fairenesse, & the age. Varro addeth beside the nature, the kind & the country. And because the pong do commonly resembled their parents, he would have you chouse such as are faire, & large bodied, and which makes most to the matter, as fruitfull as may be: which Varro, doth chiefly comend those that be of one colour, their bristles would be thickes & blacke, if it be in a cold countrey: if in a temperate, you may nourish the smooth. Their propoztion would be long, large-sided, & bellied, wide buttocked, short legged, & footed, big necked, & wel bratoned short groined, & turning upward, his taile wrinkled. The kinde is most commended, that bringeth many Pigs, the country that

breedeth

breedeth

breedeth large and great: the best age for the Boare, is a yere  
 old, though at halfe a yere old they are able to serue a Sow: one  
 Boare is enough for ten Sows, & more. The Sow is sufficient  
 to bring Pigs at a yere old, & so for seuen yere after; the fruit-  
 fuller she is, the sooner she weareth old: at the first farrowing, you  
 shall easily see what number she will bring forth: she will not  
 much differ in the other. The best kinde of Sows have twelue  
 pappes, the common sort ten, or not so many. Every Pigge doth  
 know his own Pap that he was borne too, and sucketh only that,  
 & none other: if you take away the Pig, the Pap drieth, as both  
 Plinie, & experience sheweth. They were wont to be bought and  
 bargained for in this sort. Doe you warrant that these Swine  
 are sound, that I shall well enjoy them, that you will answer the  
 faults, & that they be of a healthy breede: A wet moorish ground,  
 is meetest for this Cattell, for he delighteth not in water, but in  
 durt and myre, so much (as Varro writeth,) that the Wolfe, as  
 soone as he hath caught a Sow, draggeth her to the water, be-  
 cause his teeth are not able to abide the heat of her flesh. And al-  
 though this beast will away with any ground, (for he feedeth  
 both in mountaines, champion, & marish,) yet his chiefe delight  
 is in the woods that is full of quagmires, where there groweth  
 Stoe of Oke, Cozke, Beech, Hawthorne, wilde Olives, wilde  
 Dates, Haselnuts, Crab trees, Plome trees, and Cherie trees:  
 for these beare fruit at diuers times, and feed the Beards almost  
 all the whole yere. Wherof a Marrish is to be preferred before  
 a dry ground, that they may moule in the marsh, dig up wozmes,  
 wallow in the myre, & tumble in the puddles of water, which in  
 Summer is most needfull. They also hunt after rootes, specially  
 ferne rootes, & the rootes of Bulrushes, Rushes, & Sedges, beside  
 good grasse wel feedeth a Swine, & Orchards of Cherries, Plums  
 Apples, & Nuts: & notwithstanding all this, the Warne, for you  
 must feede them often by hand, when meate failes abroad: and  
 therfore you must preserve Stoe of Acornes, in Castornes in the  
 water, or dyed upon smoky fiores; also Beanes, Pease, & Tares  
 must be giuen them, and not so much as Watrespared: for this  
 kinde of feeding doth make them saite, and not onely sats them  
 but giueth the flesh a pleasant taste. Also the Dayrie and the  
 Wyldehouse affordeth unto holding Swine good Stoe of fowde, as

from

from the first, Whey, Buttermilke, washing of Chiefe fats and milkebolles with other swillings; from the other, Staines and drasse, washings of Hogshoads, Tunnes and Brewing vessell, Mann, Chyrell and such like\*.

When they are yet yong, & sucke, both they & their Dams must be well fed, they must be put to sate early in the morning, afoze the heat of the Sun, & after kept in shadowy places, where there is good stoze of water. Afoze they goe to pasture, they must be medycined, lest the grasse scower them too much, by which they will be greatly weakened. In Winter they must not be put abroad, till the frost be off the ground, and the Ice thawed. And though the Swine wil runne at the known voyce of the Swineheard, yet Varro wil have them brought both to pasture, and homeward, with the sound of a hozne: their meate must be given them scattered thin, so shall both lesse suffice, & the greater shall not harme the smaller: as soone as they heare the Horns, though they be never so far off in the Woods, they come running with al haste. Polybius telleth, that the Italians use not to follow their hearers, as the Crakes and others doe, but going a prettie way befoze them, they blow their hornes, their hearers being acquainted with the blast, do follow them in great order. They do so well know and obey the call of the Swineheard (if we may believe Alianus,) that when certaine Robbers, landing upon the Coast of Tuskan, and taking great numbers of them out of their Sties, carried them aboard, the theeves having weighed up their Anker and being under sayle, the Swine upon the hearing of their keepers voice, suddenly ran to the one side of the Ship, & overtur- ned, her, wherby (the Pirates drowned,) the Swine came safe to land to their Masters. As I have here told you of the conditions of the Boare and the Sow, and of their keeping: so will I now shew you the manner of their breeding: The Breeding time is reckoned to be from Winter, till the twelfth of March, so shall you have them to farrow in Summer: soz the Sow being soure Moneths with Pigge, farroweth in the fift. Shee is with Pigge at the first breeding, but they use to let them goe often to Boare, because, they soone miscarry: & if you will have two farrowes in one yeere, you must put your Sow to Boare in Februarie, or Januarie, that she may farrow in April or May,

A wonderfull know- ledge in Swine.

when as there is good pasture abroad, and swike is in his chiefe strength: & when they be weaned, they may wel sate up stalle, & grotens: & after, the Sow may farrow again in the end of Autumme: for Varro saith, her farrowing times are so divided for the nonce, as she may farrow twice a yere, while she hath four moneths to beate them, & two to sate them. As soone as they be with pigge, you must keepe the Boare from them: for with his untulnesse, he maketh them to cast. Young Swine for breede, must not be lesse then a yere old, as Varro would have it: howbeit they begin at eight moneths, and continue seven yeres. The Boare beginneth at eight moneths, or sixe, and continueth well foure yeres, and after, at thre or foure yeres old you may geld them, and fat them. Some would not have you keepe up above eight, others not above sixe: not that the Sow is able to keepe no more, but that she that keepeth more, sone faileth. Varro reporteth, that the Sowes of Aeneas Lavinus, farrowed at one time thirtie white Pigges: but it is monstrous when she farroweth more then she hath paps. Every Sow must have her stie by her selfe when she hath farrowed, and not suffered to goe with the whole heard, as other cattell are, but little Cotes to be made for them, wherein they may be kept either farrowing, or with farrow: for Swine, if they lye together in any number, being commonly ill mannered, doe lye one upon another, whereby they hurt such as are with pig. And therefore you must have severall sties where they may farrow, & made high, that the Sow cannot get out: for covered they must not be by any meanes, that the Swineheard may loke that the Sow overlay none of them, & to see what they want, that he may make them cleane, and as oft as he cleanseth it, he must strew sand, or such like, to drie up the moisture: for though she be but a stinish creature, yet loveth she to have her chamber cleane. When she hath farrowed, she requireth greater quantitie of meate, whereby she may give the more milk, specially Barley steeped in water, or ground, & tempered with water. And if you have not good stoe of meate, your best is to sell the Pigges: so shall the Dam, being delivered of her burden, be swoner with farrow again. Such as are farrowed in Winter, are commonly poore & wretched, both because of the cold, & that their Dams do not like them for want  
ting



ting of milk, & biting their Papps. If the Sow eate her Pigs it is no wonder: for Swine of all other beastes, can worst away with hunger, which when it provoketh, they eate not only their owne, but yong children, which not long since happened in Souther, to the pittifull discort of the Parent. They suffer not the Sow to go abroad in ten dayes after her farroweing, except it be to drink: after, they suffer her to goe about the house, that she may y better giue milke. When the pigs ware great, they desire to go abroad with their Dams, at which time they are sed by themselves a part, to the end they may the sooner forget their mother, which they will do in ten daies. It behoweth y Swineheard to be careful and diligent about his charge, that he have in memory every one of them, both old & yong, that he consider every farrow, & shut up those that be great with pig, y they may farrow in their sty. He must have special regard of every yong pig, that every one of them be brought up under his owne dam: so, if they get out of the stie, they straightwaies mingle one company with another, where by the pore Sow is forced to give milke many times to more pigs then her owne: therefore y Swineheard must shut up every dam with her owne pigs. And if his memory serue not to know them all, let him pitch every Sow and her pigs with a severall marke: for in a great number it shal behove him so to do, for counting his memory. The old husbands observed alwaies two times in the yere for cutting of them, y hopping & the fall of the lease, where by they avoided the danger both of the heat & cold. The Boare pigs they cut when they werz six Moneths old & again at foure yers old, to make them fat, making two wounds, & taking out the stone of every side: or else when you have taken out one stone, you must thrust your knife again into the wound, and cutting a sunder the skinne betwixt the stones, draw out with your fingers the other, so shall you make but one scarre: but this kinde of cutting is somewhat more dangerous. The Sowlers are spaid by burning the Matrix with an Iron, and the scarre healed up, where by they will both haue no more pigs, and be the fatter. Aristotle, and following him Plinie, would have the Sow after two dayes fasting, hanged up by the fore legges, and so cut, where by she will be the sooner fat: but I iudge it better to cut them when they be yong, at two Moneths old, or younger, for

A Child  
eaten by a  
Sow.

so are they in least leopardie. After they be cut, you must keepe them from drinke, and giue them but little meate: the wound must be annoynted with fresh Butter, and sowed up. As the wrickling and turning up of the taile is a signe of a sound Hog, so be there certaine and assured signes of their sicknesse: for if you plucke off the bristles from the backe, and finde that their rootes haue blood in them, it shewes the Swine is not wel. Besides, if your Hogges be sicke, or taken with a Feber, they hang their heads at one side, and suddenly as they runne abroad, they stay, and being taken with a turning giddinesse they fall down: & therefore you must marke well on which side they hang their heads, that you may cut the eare of the contrarie side to let them blood: and under the tayle be side, two inches from the rumpe, you shall strike the veine, which there is easily to be seene, by the bignesse of it: you must first beate it with a little sticke, and after it swelleth with the beating, open it with your knife, and hauing bled sufficiently, binde it up with the rind of Willow or Elm: after this, keepe them up in the house a day or two, and giue them warme water, with a good quantitie of Barley-slowze. If the Quinsie or Vuula, (to which disease this beast is wondrous subiect) chance to take them, Didymus would haue you let them blood behinde aboue the shoulders, others under their tongue: some againe cure them with setting. If the kernels well in the throat, you must let them blood under the tongue, & when they haue bled, rub their mouthes within with salt, firely beaten, and wheate slowze: Democritus would haue you giue to euery Swine, three pound waight of the beaten raste of Massadill. If they vomit, and loath their meate, it is good to giue them before they goe abroad, the shavings of Frozie, fryed with salt, and ground Peanes. Swine while they feede abroad, by reason of their great deuouring (for it is an unsatiabie beast) doe wondrously labour with the abundance of the Splene: for remedie whereof, you shall giue them water as oft as they thirst, in Troughes made of Lamarice, the sapte of which wood is very holeisome for them. Democritus teacheth to giue unto Hogges that haue the Splene, the water wherein the Coales of Death hath bene quenched. This beast hath sometime a sicknesse wherein he pines away, and forsaketh his meate: and

Of diseases  
in Swine,  
and the  
cure.

The Quinsie.

Kernels.

Vomit.

Splene.

Cholcr.

if you bring him to the field, he suddenly falleth dolone, and lyeth as it were in a dead sleepe: which as sone as you perceiue, you shall shut up the whole Heard in some house, and make them to fast one day, both from water and meate: the next day, the roote of the wilde Cucumber stamped, and strained with water, is giuen them to drinke: which as sone as they haue taken, they fall a vomiting, and so purge themselves. When they haue thus expelled their choler, you shall giue them hard Beanes, strained with Wyne. An excellent medicine against all Deffilence of Swine, both Hieronimus Tragus teach, which is, when you see them infected, to giue them the Rotes of Polipodi, or. The Ferne boyled in Wine, whereby they shall purge whatsoeuer is euill from them, and most of all choler, wherewith Swine are most troubled. Whereas thirst in Summer is hurtfull and dangerous to all kinde of Cattell, to this beast it is most hurtful: and therefore you must not water them as you doe Sheepe and Goates, but twice, or thrise a day: but if you can, you must keepe them by the water side, that they may goe thereto at pleasure: for the Swine is not content with drinkeing, but hee must often cole & plunge his filthy panch in the water, neither delighteth he in any thing so much, as to wallow in the dirt. And if you haue no such place nere, you must draw some water from the Well, and giue it them in Troughs abundantly: for except they drinke their fill, they will fall sicke of the Lungs: which disease is cured (as Columella writeth) by thrusting the roote of Wetterwort through their eares: Pliny affirmeth the Eode to be a present remedie for the sickenesse of Swine. Some say, that if a Sow lose one of her eyes, she dyeth sone after: otherwise she liueth fiftene yeeres. There is a kinde of disease amongst Swine (though otherwise they be healthie and fat) wherein their flesh is all infected with little graines, as big as Peason: the Greeks call them Galazos, and wee at this day Meazled Swine, which you shall sone perceiue by the sight of the tongue, and the hoarsenesse of their voyce: this disease they say, is naturall unto them, from which you shall preserue them, if you naye certaine plates of Lead in the bottome of their Trough. You shall also keepe them from this disease, if you giue them to drinke the Rote of Bryony: the generall and common

Thirst.

Lungs.

Meazled Swine.

remedy is Allome, Bymstone, and Bay-berries, of each a like: adde thereunto a handfull of Date, beate them all together, and put them in a Bagge, which Bagge you shall cast into their water when they drinke, and renew it twice in the yeare.

  
Hidden  
sickness,

If you finde in your Swyne any sodaine or hidden sicknesse, the onely generall, most certaine & usuall helpe for the same, is first to let him blood under his tayle, and under his eares, and if they bleede not freely enough, you shall beate them with a small sticke, and that will bring forth the blood; then wrap about the sores the backe of a young Oler, and then keepe him warme and give him to drinke warme Ale, well mixt with Barley-meale and Red-saker in powder.

The Gall.

The Gall is a disease amongst Swine, because that choler is potwettfull in them, which you shall know by a swelling which will arise under their iawes; & the Cure is to stampe Colwozte and Baston, and mixe it with Honey and water, and then straining it give it the Swyne to drinke by a pinte at a time.

The sleeping  
evill,

Swyne are much subiect to the Sleepingevill in the Sommer time, & you shall know it by their continual sleeping & neglecting their meate. The Cure is to house them up, and keepe them fasting foure and twentie houres, then in the Morning when hunger pincheth them, to give them to drinke swillings warme, in which is stampt good stoe of Stonectrope, which assuages as he hath drunke he will vomit and cast, and it is a present remedy.

The Poxe.

The Poxe is an infectious disease in Swyne, and proceedeth from corrupt blood ingendred by ponertie, wet lying, A oufinesse and such like, and the Swyne can never prosper which hath them. The Cure is to give him first to drinke two spownefuls of Treacle, in a pint of Honeyed water, which will expell the infection outwardly, then to anoynt the sores, with Bymstone and Boares greasse, boyled together & to separate the sicke from the sound. Touching the feeding of Swine, you shall easily (though words be wanting) finde Barnes, Pastures, and Corne-fields to feede Swyne in. They will be fat (as Plinie supposeth) in threescore dayes specially if they be kept from meat th. & daies before you feede them: they are fatted with Barley, Dates, or other Corne, or Pulse, either given whole, or ground, but of all others,

Feeding  
Swyne.

best

best with Mast : and that flesh is better, and of more substance that is fed with Acornes, then that which is fattened with either Barley mase, or Chestnut. This beast will in time be so fat, as he will be able neither to goe, nor stand. *¶* **V**arro tells that there was sone in Arcadia a Sow so fat, that she was not onely unable to rise, but suffred a Spoule to make a nest in her body, and to lay her young there. The same Varro reporteth, that there was sent to Volumius a Senator in Rome, a piece of Porkke of two ribs that weighed thre and twenty pound: the thickness of which Sow from the skinne to the ribbe, was one foote and thre inches. Your best is to put to fattning your Swine of two or thre yeeres old : for if they be younger, their growing will hinder their feeding.

These are the opinions of the Ancients, but to come to the true and perfect order of feeding of Swine, it must be according to the Countrey wherein you live, as if you live in the Countrey which is *Uladie*, & where Rose of Mast is, then the mast is a sufficient feeding, and will make them fat in five or seven weekes : then having got flesh and fattnesse bring them home and for ten dayes or a fortnight, feede them with dry Pease or Beanes, and plentie of water, and it will so harden their flesh and fat that it will not consume when it comes to boyling.

If you live in a champaine Countrey which is farre from woods, then buy up your fatlings & let them not range abroad but have their foode & water brought unto them till they be fat: now the first two daies after their putting up, give them nothing, the third day early in the morning give them a prettie quantity of dry Pease & Beanes, at none give them as much more, at foure a clock as much more, & when you go to bed as much more, but all that day no water. The next day you shall feede them againe at the same houres and set water by them that they may drinke at their owne pleasures: & twice or thrice a weeke as your provision will serve you, it is good to fill their Bellies with Swarte Tallow, Buttermilke or warme wash, but by no means scant their proportion of Pease and Beanes, and thus you may feede a Swine fat enough for slaughter, in a moneth or five weekes.

There is another way of feeding in Champion countreies & that is at the Racke or Racke of Pease & Beanes, which Rackes must be

The best way of feeding.

The Birds  
of the  
Muses,

as the wisest Governours & Councellers in Common weales, have taken the Bees for their patterne in choosing of Princes, distributing of Offices, rewarding of vertues, and punishing malefactors. Varro did alwaies call them the Birds of the Muses: and Virgill with wonderfull colours, doth eloquently set forth the Bees, their Common weale, Palaces, Buildings, Lawes, Warrers, Quarres, and Travailles, supposing them to be partakers of reason, and that they have some instinct from above, in that they so nere resemble the mindes of men, yea, many times excell them. If the King be taken, the whole Swarme is had: if he be gone, they disperse themselves abroad, for they cannot live without a King, hating as well the headlesse government, as the subjection to many heads. If the King, or (as we tearme him) the Paister Be die, the whole Swarme dropeth, and mourneth, they straight waies cease from gathering of Honey, they sitte not abroad, but onely with a heauy and sorrowfull humming, they swarme and cluster together about his body. The nature surely of this poore creature is greatly to be wondered at.

Their Princes pallace is sumptuously built, in some feberall part of their Hives, being mounted above the rest, which if you happen to bruiſe, you destroy the brood. They live all as it were in a Campe, and duely keepe their watch and ward, working together, and oftentimes sending abroad their Colonies, they are warned at their Captaines appointment, as it were with the sound of a Trumpet, by which they know both their times of warres, and truce: they ward all the day time at their gates in warlike manner, and have great silence in the night, till one of them in the morning humming out the discharge of the watch, they get them abroad to their businesse: when the sleepe time of the night comes in, they make lesse and lesse noyse, till one of them goeth about with the like sound that he gave in the morning, setting as it were the watch, and giuing them warning to goe to rest: at which time they all suddenly hold their peace. In the morning (as I said) at the discharge of the watch, they roame straight to the gates, but lye not abroad, except they see the weather will be faire: whereof by nature they have perfect understanding.

Being

Being loded, they flie with the winde: if any tempest suddenly arise, they counterpoise themselves with little stones, flying in the winde as neare the ground as may be: their labour, both at home, & abroad, is certainly appointed. They labour at the first within the compasse of thre score paces about the Hive, & when the flowers there have bene sufficiently wrought, they send a broad their discoverers to finde out more fode. And when they fall all together to their businesse, some worke the flowers with their feete, others carry water with their mouthes, and droppes in their little flacies: the young lustie fellows labour abroad, the elder at home. Those that goe abroad, do with their forelegs lade all their Whighes, which nature for the nonce hath made rough: thus being loded, Legs, Head, Backe, and all, as much as they may beare, they returne home, where there waiteth commonly thre or foure at the doze to unload them. Within, all this while are some laying in order, some building, some making cleane, and some making ready their meat: for they feede severally, for feare of beguiling one the other. They frame their houses archwise within the Hives, with two passages, so as they may enter one way, and goe out another. Their coames that they make are wrought full of holes, which holes (as Varro saith) are their Celles or lodgings, made every one five square, according to the number of their feet: these Celles they doe fill with Honey, filling every one in a day or two. These coames are fastened to the upper part of the Hive, & hang little upon the sides, not cleaving to the Hive, being now cornered, now round, according to the fashion of the Hive: as both Plinie reporteth, & I shall hereafter shew you when I speake of the framing of the combs. The Combs are kept up from falling, with small pillars and proppes below, so built as they may goe round about to repaire them. The thre first sorts of their Celles beneath, are left empty for feare of the Hive: the uppermost are as full as may be. Such as are loiterers and idle vagabonds amongst them, are noted, and punished with death.

The punishment of loiterers.

Aristotle maketh many sorts and kinds of them, whereof he counteth the short speckled, & well knit to be the best: and next to them, the long ones like Waspes: the third, the kinde that you call the Drones, with a very large bodie: the fourth, the

The kinds of Bees. The Drones.

Drones,



The  
Drone,

Drone, being bigger then all the rest, wanting both his Sting and courage to labour: and therefore they use to make at the entrie of their Hives small Gates, wherein the Bée may enter, but not the Drone. And the same Aristotle, in the chapt. before, saith, that there are two kindes of Kings or Paister Bées, the one of a golden colour, which is counted the best: the other blacke, and partie coloured: they be twise as bigge as the other Bées, the tayles of them as long as one and a halfe of the other, they are called of some, the Mother of Bées, as the chiefe bræders, because the young of the Drones are bredde without a King, but the other Bées never, Virgill following herein Aristotle, both most commend the little, long, smooth, and faire Bée, and making mention of two sorts of Kings, he describes the worker, whereby he shall doe no harme.

Breeders.

The best  
sorts of  
Bees.

The shape  
of their  
king.

Destroy (saith he) and let the other live,  
Whose golden hew doth glister in the eye:  
And deck't with glittering scales, faire shew doth give,  
Offarre more grace, and faire more Majestie.  
With loathsome looke the other doth appeare,  
And dragging drawes his tayle with heaue cheare.

And as there is twosorts of Kings, so is there of the other Bées.  
Some uylie seeme, and some againe doe shine,  
Beside with drop of golden colour fine.

Being milde and gentle: for the Bée, the greater he is, the worse he is, and if he be angry, and fierce, and round, he is worst of all. And because (as I said before) the best are onely to be medled with, sith the good and the bad are alike chargeable, and require like tendance, and speciall hæde to be had that you mingle not the bad with the good: for lesse will the encrease of your Honey be, if some of your Swarme be ill matched. You may keepe your selfe with Bées thre manner of waies, eyther by buying them, taking the wilde Swarmes, or making them by Arte. Such as you buy, let them be of the kinde and shape that I told you of, and be sure before you buy them, that the Swarmes be whole and great,  
which

What to  
be consid-  
ered in  
buying of  
Bees.

which you may judge by looking into the Hive, or if you cannot  
 be suffered so to doe, you may guesse it by other tokens: as if so  
 be you see great numbers clustering at the doore of the Hive, and  
 if you heare a great hazzing and humming within: or (if they  
 be all at rest) putting your lippes to the mouth of the Hive, and  
 blowing therein, you shall easily perceibe by their answering  
 sound, whether their number be great or no. In buying them,  
 beside, you must looke whether they be sound, or sicke: the signes  
 of their being in health (as shall be shewed when I speake of  
 their diseases) is, if their Swarmes be great, themselves faire,  
 and well coloured and worke lustily. Againe a token of their  
 not being well: as if they be hazzie, looke loathsomely, and dis-  
 stily, except at such time as they labour: for then they waxe  
 leane and rough, with extreame travell. You must make your  
 coniecture likewise by their age, such as are not above a yere  
 olde, looke faire and smooth, and shine, as if they were dyed:  
 the old ones are both in sight and feeling, rough and rugged,  
 and by reason of age, wrinkled: which nevertheless, for cum-  
 ming in making their Combs, experience, industrie, and skil-  
 fulnesse in the weather, doe farre passe the others. In any wise  
 see that you buy them rather from your next neighbour, then  
 from a strange Countrey, or farre off, for they many times pe-  
 rish by Change of ayre, or shaking in the carriage. And if you  
 be dyden to carry them farre, take heede you neyther iogge, nor  
 tumble them: the best way to carry them is upon a mans shoul-  
 ders, and that in the night time, suffering them to rest in the  
 day, and pouring in to them such sweet things as they delight  
 in, keeping them close. It is better removing them in the  
 Spring, then in Winter: for they doe not so well agree with  
 Winter. If you carry them from a good place, to a barraine,  
 they will straight wayes bid you farewell, and forsake their  
 Hives. When you have brought them to the place where you  
 meane they shall stand, if it be day time, you must neyther open  
 them, nor place them till it be night, to the end they may after  
 the quiet rest of the night, goe charefully to their worke the next  
 morning. Be sure to marke them well besides for two or three  
 dayes after, whether they goe all out or no: for if they doe, it  
 is a shewd signe they will away. Sometime, if the place be

Transport-  
 ting of  
 Bees.

The tas-  
 king of  
 Bees.

good

good, you shall assay to stoze your selfe with wilde Bees: for although the Bees (as Plinie saith) cannot be rightly tearmed eyther wilde, or tame, yet Varro calleth them wilde that bræde in wilde places, and tame, such as we keepe at home: and affirmeth the manner of keeping them to be diuers. There is great stoze of the wilde sort in Sarmatia.

To finde  
out the Bees.

The greatest token of Bees and Honey néere, is where they be in great numbers about the waters: for if you see the number but small, it is a signe it is no good place for Bees, and if so be you see they come in great numbers, you may soone learne where the stockes be: in this sort, as Columella and others haue taught: You shall carry with you in a Saucer, or such like thing, some redde colour, or painting, and standing néere to springs, or waters thereabouts, as fast as they come, touch them upon the backes while they are a drinking, with some little straw dipped in the colour: and carry you there till such time as you see them retorne. If the Bees that you marked doe quickly retorne, it is a token their houses be not farre off; if it be long ere they come, it shewes they dwell farther off: wherefore you may iudge by the time. If they be néere, you shall easily finde them, if they be farre off, you shall come to finde them in this sort: Take a peece of a Rade, or a Ker, with his knots and soyns, and making a small hole in the side, powze into it eyther Honey, or some sweet thing, and lay it by the water: and when you see the Bees haue found it, and entred the hole for the saueur of the Honey, stoppe you the hole with your thumbe, and let but one goe out at once, whose course you shall follow, as farre as you can see him, and this shall bring you part of the way: when you can no longer see him, let out another, and follow him, and so another, and after another, till you come to the place. Others use to set some little vessels with hony by the water: which when some one Bee or other hath hapned to taste, she giueth straight knowledge to her fellows, where by by their flying in number, they come to finde out their dwellings. If you finde the Swarme to be in some such hole, as you cannot come at them, you shall drive them out with smoke, and when they be out, bring them downe with the ringing of a latten Bason, so as they may settle upon some tree,

from

from whence you shall shake them into your Hibe. If the swarme be in some hole aboue in the branches, you may saue off the branch handsomely, and cobering it with a white cloth, place it amongst your Hibes. If they be in the body of the tree, then may you softly saue off the tree aboue the Bees, and afterwards, close underneath them: and being cobered as before, carry them home, stopping well the chinks and rifts, if there be any. He that seeketh the Bees, must begin in the morning, that he may have the whole day before him to marke their labouring. Thus farre of the kinds of Bees, and getting of them: now will I shew you of the placing of them, ordering, and keeping of them. The place for your Bees and your Hibes must be so chosen, as they may stand quietly and secret, standing specially in such place, as they may have the Sunne in Winter, and in the Spring time allway at the rising, and such as is neyther too hot, nor too cold: for the excesse of eyther doth hurt them, but rather temperate, that both in Summer and Winter, they may have moderate warmth, and wholesome ayre, being farre removed from the company of eyther man, or beast.

Standing  
for Bees.

For they most of all delight in quietnesse: beware beside, that there be no hurtfull creature neare them, as the Toode, that with his breath doth both poyson the Bees, and also draweth them to him; the Woodpecker, the Swallow, the Sparrow, the Stoake, Spiders, Hornets, Butter-fles, Serpents, and Hothes.

What Vers  
mine an-  
noyeth the  
Bees.

Drive from thy Hives the hurtfull Lysart greene,  
Keepe Throffles, Hennes, and other Birds untrew:  
And Frogne, on whose brest as yet is seene  
The bloody marke of hands that Itys slew.  
All these destroy thy Bees, and to their nests doe beare  
Such as they take in flight, to make their young ones cheare.

Of such things as hurt your Bees, I will here after speak more, where I shall shew you of their diseases & harmes: in the meane time I will goe forward with the placing of them. The place where they should stand, would rather be in the valley, then be-  
re high: but so as the rebound of no Ecco, doe hurt them, which  
sound is very noysome unto them: so shall they see with more  
ease.

The valley  
better for  
the Bees,  
then the  
hill.

ease and speed to the higher places, and comt laden downe againe with lesse traubale. If the seate of the house will so suffer, it is good to have your Bées stand neare your house, and to be enclosed with a hedge, or a pale: but on such side as they be not annoyed with the sent of Snake, pyvie, or dunghill. The best standing, is within the sight of the master, by whose presence they are safest kept. For their better safety (if you seate them) you may set them a yard or more from the ground, enclosing them with little grates left open against every Hibe, or so lettised with stone, as a Bée may easily come out and in, and escape both Birds and Water: or if you list, you may make a little house by for the Keeper, wherein you may lay your Hibes for your Swarmes, and other necessities meete for your Bées, setting nere to the Hibes some shadowing Trees for them to swarme upon.

Faire water necessary for Bees,

If it may be, let them have some faire Spring nere them, or else some water conveyed in a pipe: so without water they can neether make Honey, Waxe, nor breed up their young.

Herbs that Bees delight in

Round about the Bée-yard, and nere to the Hibes set hearbs, plants, and flowres, both for their health, and profit: specially such as are of the sweetest and delicatest savour: as Cihylus, Time, Cassia, Rosemary, Savery, Smallage, Violets, Sage, Lavender, Myrthe, wilde Parierum, wilde Time, Balme, swete Parierum, Saffron, Beanes, Mustard seed, Poppey, Bellilot, & Roses. And if there lie Ground nere it for the purpose, sow it with Rape seed, and Barlewheat: so they wonderfully delight in the flowres hereof. Plinie writeth, that Bées delight greatly to have Brome flowres nere them: of trees they most delight in these. The Vine, the Willow, the Firre tree, the Almond, the Peach, the Pearre tree, & the Apple, and such as the flowres there of be not bitter. Of the wilde sorts, the Terebinth, the Lentise, the Lind tree, the Cedar, and the Hawthorne. The best honey (as Palladius saith) is made of time: the next of wilde Time: the third, of Rosemary. You must remove from your Bées, the Pew tree, Box, & the Coznel: Plinie would also have the Olive away. Banish also all the kinds of Spurge: for with that, as also with the flowres of the Cornell, they fall into a flire and die. Besides you must suffer no Wormewood, nor wilde Cucumber to grow nere

nere them, so they both destroy the Bees, and spoyle the honey. Hearbs  
may come  
to Bees.  
And because the flowre, or fruit of Climes doth specially hurt

them, therefore in such parts of Italy where plenty of Climes grow, the Bees do not long continue. Touching your hives, they are made of divers fashions, according to the manner of the country. Some are made round, some square, some three foot in height, and one in breadth, made very narrow toward the top, least the Bees should overlabour themselves in filling of them. Some make their hives of L anterne hozne, or Glasse, to the end (as Pliny saith) that they may view the manner of their working. Varro maketh mention of earthen hives well plaistered within and without with good Dre dung, so as the roughnes & ruggednes cannot displease them: but so all that, the earthen hives be the worst that may be, because in Summer they be too hot, and in Winter too cold. The best hives, are those that are made of Coyke, wicker, or rindes of trees, because they keepe out both cold and heat: the next are such as are made of straw and Bents matted together, two foot in breadth, and so much or more, according to the number of your Bees, in height. In some places they make them of one peece of wood, cut and hollowed for the nonce, or of ioyned boards, five or six foot in height, and these neither are too hot in Summer, nor too cold in Winter. Of these wooden hives, the best are those that are made of the Figge tree, Vine, Ashe, and Walnut, of such length (as I told you) and a cubit in breadth. Besides, they would be covered with either Lime, or Dre dung: so so (saith Florentine) you shall keepe them long without rotting. You must also boze them through slopewise, where by the winde gently enting, may drie up all cobwebs, or such like noyances: You must alwaies have good store of hives lying by you, that may be removed, and easily carried where you list: so the fired, or standing hives, be discommodious, as which you can neither sell, nor remove: though Celsus seeme to commend the standing hives, because they are neither subject to stealing, nor burning, being made of Bricke, or Loame. It is enough to have three rankes of them, one above the other: so the keeper shall have enough to doe to overlooke the uppermost. The part where the Bee doth enter, must stand a little lower then the hinder part, so as the raine can not runne in, and the water (if there be any) may easily boide.

Of the hive

How you  
must place  
your hives.

And because cold both more annoy the Bees, then heate, you must arme your hives well behinde, against the hurt and bitterness of the North winde, and let the Sunne come bountifullly to them in the front. And therefore it is best for you to make the holes where they come in and out, as small as you may, that they suffice onely for the bignesse of the Bees, partly for a vordring of cold, and partly to keepe out the Cuckes, Beetles, Butterflies, Wats, Mothes, and such other hurtfull vermine, that would otherwise destroy the Combes: wherefore it is good you have two or three such smal holes together in every hive, for the commoditie of the Bees, and to restraine the enemye.

When the  
Bee resteth.  
The be-  
ginning  
and order  
of his tra-  
vaile.

This having declared unto you before their toile, their diligence, and order of their travaile, I will now likewise shew you what time they begin to labour. In the Winter time, from the setting of the seven starres, til the beginning of the Spring, they keepe their houses, and come not abroad, by reason of the cold: in the Spring, they come straight abroad, & from that time forward (if the weather let them not) they never rest day. First of all, they frame their Combs, and Ware, that is, they make their houses and chambers, whereof they make so many, as they think themselves able to fill: then fall they to breeding, and last of all, to making of hony. Their Ware, they make of the flowres, trees: & plants: their hony, of the gums and clamminesse of trees that are clew, as Willow, Elmes, Alder, Juice, Gumme, and Rozen: Aristotle saith, they make their Combs of flowres, their Ware, of Gummes, and their Hony, of the dew of the Ayre, that falleth chiefly at the rising of the starres, and that there is no hony made before the rising of the seven starres, & their combs of flowres, and that the Bees doe not of themselves make the hony, but onely gather the honied dew that falleth, because the keepers finde the Celles to be filled in some one, or two dayes: & that the hony being taken away in the end of Summer, the hives are not found to be furnished againe: though there be flowres enough at that time. This, and much more hereof (saith Aristotle) whom Plinie following, affirmeth hony to be made of the Ayre most of all, at the rising of the starres, chiefly the Dogge rising out early in the morning: therefore you shall find, in the morning betimes, the leaves of the  
trees



trees bebedowed with honte, as you shall likewise haue the Ap-  
 parrell, Maye, and Beardes, of such as haue bene early abroad  
 in the morning. Our Common people call it Manna, or Honey Manna,  
 deu, cleaving to the leaues before the rising of the Sunne, as it  
 were Snow, or rather Candied Sugar. Whether it be the  
 sweate or excrement of the Heauens, or a certaine spittle of the  
 Starres, or a iuyce that the ayre purgeth from himselfe: howe-  
 soeuer it be, I would to God it were such as it first came  
 from aboue, and not corrupted with the vapours and damps of  
 the earth. Besides, being sucked up from the leaues by the  
 Bees, and digested in their Patres (say they cast it up at their  
 mouthes) and also distempered with the sent of the flowres, ill  
 seasoned in the Wibes, and so often altered and transformed,  
 losing much of his heavenly vertue, hath yet a pleasant and  
 speciall celestiall sweetnesse in it. The best Honey is of Time  
 (as I haue sayd before) and good likewise of Cithisus, of the  
 figge Tree very pleasant: Varro saith, they take not their  
 sustenance, and their Honey both from one. A great part of  
 their foode is water, which must not be farre from them: and  
 must be very cleane, which is greatly to purpose in making of  
 good Honey. And because every season suffereth them not to be  
 abroad, they must at such times be fed, least they should then  
 be forced to liue all upon the Honey, or to leaue the Wibes  
 emptye. Some giue unto them Water and Honey, sodden to-  
 gether in little vessels, putting into it Purple wool, through the  
 which they sucke it, for feare of drinking too much, or drow-  
 ning themselves: others, dry Figges, either stamped by them-  
 selues, or mingled with water, or the drosse of Grapes, or Rea-  
 sins mingled with sweete Wine, and socks made therewith, or  
 with Honey: yea, I haue seene some use (but in my fancie with-  
 out reason) to giue them Bay Salt. Whereouer, as the Bees re-  
 quire great looking to continually, and their Wibes daily atten-  
 dance, so most of all they craue diligent regard, when they are  
 about to swarme, wherunto if you haue not a great good  
 eye, they will bid you farewell, & seek a new Master. For such  
 is the nature of Bees, that with every Prince, is bred a Com-  
 monwealt, which as long as they are able to traualle doe  
 as it were disdaine the government and fellowshippe of the

The best  
 Honey of  
 Time.

Bees, their  
 Winter-  
 food.

Going a-  
 way of  
 Bees, and  
 the tokens  
 thereof,

Going a-  
way of Bees,  
and the  
tokens there-  
of.

old Bees, which most hapnieth when the Swarmes be great and  
luxe, and that the old Stagers are disposed to send abroad their  
Colonies: and therefore you shall by two tokens specially know  
when the new Princes with their people will abroad. The first,  
when as a day or two before they cluster and hang (specially in  
the evening) about the mouth of the hive, and seeme to shew by  
their comming out, a great desire to be gone, & to have a King,  
dome and Countrey by themselves: which, if you prepare them  
at home, they content themselves very well with it. And if the  
Keeper provide not for them, taking themselves to be greatly  
injured, they depart, and seake a new dwelling. To prevent this  
mischiefe, Columella willes you to looke diligently to them in  
the Spring time about eight of the clocke, or at noone: after  
which houres they commonly goe not away, and to marke wel  
their going out and comming in. The other signe is, that when  
they are readie to flye, or going, they make a great humming  
and noyse, as Souldiers ready to remove their Campe. At  
their first comming out, they flye aloft, playing up and  
downe, as it were tarrying for their fellowes till all their  
company come. Yea, many times the old inhabitants, being  
wearie of their dwellings, doe leave their hives, which is per-  
ceiued when they come so out, as none remaine behinde, and  
presently mount into the ayre; then must you fall to ringing of  
Hans and Wasons, to seare, or bring downe the run-aways,  
who being amazed with the great and suddaine noyse, doe either  
presently repaire to their old hive, or else knit themselves in  
swarme upon the branch of some tree to the place: then must the  
Keeper out of hand be ready with a new hive prepared for the  
purpose, and rubbed with such hearbs as the Bee delights in, or  
sprinkled with little drops of honie (I have sene in some  
places used Cream) and so shaking them into the hive, and  
covering them with a shete, let him leane them till the mor-  
ning, and then set them in their place. He must (as I told you  
before) have divers new hives in a readinesse to serue the turne  
withall. And if so be you have no trees nor bushes growing  
nere the hives, you must thrust into the ground certaine  
boughes & branches for the purpose, whereupon they may knit  
and

Bees delight  
in new  
hives.

and settle themselves, and rub over the boughes with Balme, or such pleasant hearbs, that when they (as I say) knit and settle, putting under the hive, and compassing them with some little smoke, you may cause them to fall into a new Country: for they will rather goe into a new hive, then into an old: yea, if you offer them the hive that they came from, they will forsake it for a new. Some of them will suddenly leave the hive without any tarrying, which the Keeper may perceive, if he use to lay his eare in the night time to the hives: for about three dayes before they goe, they make a great noyse, like Souldiers ready to raise their Camps.

Signes of  
suddaine  
departing,  
and remo-  
ding.

And therefore when such noyse is heard, they must be very wel watched, whether they come out to fight, or to fly. the keeper must be at hand: their fights, whether it be among themselves, or one hive with another, are easily tickled:

A little dust cast up on high,  
Doth end the quarrell presently.

Dr Honied water, sweet wine, Broath of Beasins, or any pleasant liquour, wherein they delight, cast and sprinkled amongst them doth straightwaies part them. The selfe same remedies makes two Princes of them, being fallen out, to be quickly good friends againe: for when there hapneth many times to be in one hive sundry Kings, by whose dissention the whole number of the Subjects, in the Princes quarrels, goe together by the eares, you must by all means seeke to remedie it, least by civill dissention, the poore people be destroyed. And therefore if you perceive them often to fight, your best is to kil the headdiest of the dissention, and to appease the fury of the fighters, by those means that I told you before. And when the Partial swarme is settled upon some branch of a tree, look if they hang all together like a cluster of Grapes, which is a signe, that there is either but one King, or if there be moe, they be agreed: & then you shal not trouble them, but take them into the hive: but if so be they hang in two or three clusters, like the Waps or Adders of a beast, it is a signe there are divers Master Bees that agree not together: for which you shal search where you see the Bees to cluster most. Therefore anointing your hands with the succ of balme, or Betwort, that they may abide you, thrust in your fingers softly among &

Divers  
Kings in  
one hive.

The shape  
of the  
King.

To keepe  
the king at  
home.

them, and shedding the Bees, search well till you have found the  
ring leader of the dissention, whom you must take away. What  
the proportion and shape of the King is, I have told you a little  
before, that is, something yonger then the other Bees, and lesser  
winged, of a faire and glistering colour, smooth, & without sting.  
Notwithstand, some of them be shagheared, and ill coloured, which are  
naught, & to be killed: Let the best (as he saith) weare the Crowne:  
who must himself also be deprived of his wings, if he be too busie  
headed, and will alwaies be carrying his people abroad: so shall  
you, with the losse of his sayles, keepe him at home spight of his  
teeth, while he dare not for want of his wings venture out of the  
doores, & so shall he keepe his people at home. Dydimus writeth,  
that the Bees will neuer go away, if you rub the mouth of your  
hive with the dung of a new calved Calf. To the same end  
serbeth it, if you stampe the leaues of wilde Olives, and Garden  
Olives together, and annoint the Hives in the evening there,  
withall: or if you wash the Hive & the walles with honey sodden  
with water. When an old stocke is come to a small number, &  
that there be not Bees enough to furnish the Hive, you must sup-  
ply the want with a new Swarme, destroying the King of the  
first swarme in the Spring, so shall both the swarms dwell toge-  
ther in amitie with the old Parents, as shal be shewed you here-  
after, where I meane to speake of repaying the stocke. The  
Summer being past, ensueth the time for taking of Honey, to  
which harvest the travaile of the whole tendeth. The time for  
gathering thereof, Columella teacheth to be then when we per-  
ceive the Drones to be driven out, and banished by the Bees: for  
thence they Drive the droulie Drone away. This Drone is an  
untimely birth, and an imperfect Bee, but very like unto the Bee,  
save that he is bigger bodied, lying alwayes idle in the hive, not  
labouring himselfe, but feeding like a lubber on the sweat of his  
fellowes: yet serueth he for the breeding and bringing up of the  
young: which when he hath done, they thrust him out of  
the hive. Varro appointeth thre seasons for the taking out the  
honey: the first at the rising of the seven Stars: the second in Sum-  
mer: the third at the setting of the seven Stars: this signe is when  
the Hives be heaue, and that they be double furnished. You may  
make your conjecture by the Bees, when they make great noise  
within

The Drone.

Time for  
taking the  
Combes.

within, and when you see them stand dauncing, and playing at  
their dances, as also, if looking into the Hives, you perceiue the  
mouthes of the Combs to be covered with a Honey filme. Dydi-  
mus thinketh it to be the best time at the first haruest; the rising  
of the seuen starres, or the beginning of May: the second, the be-  
ginning of Autumne: the third, the setting of the seuen starres,  
which is about October: howbeit, these times be not alwaies  
precisely to be obserued, but according to the forwardnesse of the  
season: for if so be you take the honey befoze the Combs be ready,  
they take it ill, & presently leaue working. The time for gelding  
or diuving your Bees, is early in the morning: for you must not at  
nones trouble your hives. For this kinde of gelding of your hives  
you must haue two instruments for the nonce, a foot and a halfe  
long and more: the one of them must be a long knife of a good  
bryeth, hauing at the end a bending crooke to scrape withall: the  
other must be plaine, very sharpe, that with the one you may cut  
the Combs, and with the other scrape them, & draw out what so-  
euer dregs or filth you finde in them. And if your hives be not  
open behinde, you shall make a smoke with Gaibannum, or Dry-  
dung, being put into an earthen pan made for the purpose, small  
at the one end, from whence the smoke shall come, and broad at  
the other, from which you shall blow up the smoke from the fire,  
in such sort, as Columella sheweth you. This pot you must suffer  
at the first, to smoke into the hives, & afterward round about with-  
out, & so shall you diuue them. He that medleth in this case with  
the Bees, must specially keepe himselfe from lechery, & drunk-  
kenesse, and wash himselfe cleane: for they love to haue such as  
come about them to be as pure and cleane as may be. They be-  
light in cleanlinesse so much, as they themselues doe remooue  
from them all filthinesse, suffering no filth to remaine amongst  
their labours, raking up in heaps together the excrements of  
their olou bodies, which in the rainy daies, when they worke not  
abroad, they remooue and throw out of the hives. If you set Cat-  
licks by them they will sting all that come nere them. Their  
anger is chiefly alluaged by the presence of those that use to  
them, at whose coming they waxe milder, being well acquaint-  
ed with those that are their keepers: If there be two swarms in  
one hives, and agreed together, they haue two sorts and manner

Gelding or  
driving the  
Hives.

Bees hate  
thieves and  
uncleane  
persons.

Fashioning  
of the  
Combes.

of Combes, every swarme observing his owne order, but all the Combes so hang by the sides of the hives & sides, as they touch not the ground where the Bees use chiefly to walke, as I said before of the building of their Combes. The fashion of their hives, is alwaies according to the fashion of their hives, sometimes square, sometimes round, sometimes long as the hives are, in which they are fashioned as in a mould. Plinie writeth, that there were Honey Combes found in Germanie, of eight foote in length: but howsoever they be, you must not take them all out, but must use discretion in taking of them. Amongst our people in the first Bee harvest (if I may so tearme it) they use with their crooked knife, to pare away no more but emptie Celles, till they come to those that be full, taking heed that they hurt them not: & this they do in the spring. In the latter harvest, that is, at the end of Summer, they take the Combes full of Honey, in such sort, (as I told you) burning the old Bees, & alway keeping & preserving the yong swarmes. In the first taking, when the Beesdoves are full of stolozes, they leave the first part of the Combes behinde: in the latter harvest, when winter approacheth they leave a third of their Combes for the sustenance of the Bee. But this quantity cannot certainly be prescribed for all Countries; but must be measured according to the abundance, or want of stolozes. Dydimus Thaleus, thinketh good to leave them a tenth of their Combes in the Summer time, if the hives be very full, otherwise, according to the proportion: and if they be emptie, not to meddle with them. Plinie would not have the Honey of the Spring time (which he calleth stoloz Honey) to be medled withall, but to be spared. Others leave no Honey at all for them, because of the abundance of stolozes that are then springing, which is the chiefe foundation of their Combes. Such as be skilfullest doe leave the Bees a twelfth part of their labour: and this they doe about thirty dayes after the swarme, which they make an end of commonly in May. The old and the corrupt Combes, are for the most part at this time taken away: and the sound, and such as are filled with Honey, left. In taking of the Honey at the later time of the year, they use to destroy the oldest stocks, to save the charges of feeding of them. This dying and gelding of hives is not commonly

monly used in the Countrey, but they rather, according to their custome, at the end of the yeere burne them, alledging for their authoritie an old English Proverbe of their owne :

Drive Bees, and lose Bees : burne Bees, and have Bees.

And in some places they destroy them. When you have thus spoiled your Hives, you shall carry all your Combes into some handsome place, where you meane to make your Honey, & stop up all the holes and crevices of the walles and windowes, as close as you may : so the Bees shall be very busie to recover the prey. Whensoever you take your Combes, looke that you straine out the honey the same day, while they are hot & new. The honie that you take at the full of the Moone (as Plinie saith) yieldeth most, and the sapper the day is, the thicker it is. The Combes being taken out, let them rather be warme, then heated, least by over-heating them, you straine out the Wax with the Honie : afterward, put them into a good strong bagge, and with a Presse or other Instrument made for the purpose, or with a thicker Basket, presse out the Honie ; but so that before you presse it, you sever from it such Combes, as have in them young Bees, called with some, Cubbes, or any red or rusty Presse : for these with their evill iuyce corrupt the Honie. When the Honie is thus strained out, it is put into earthen vessels, & suffered to stand uncovered a few dayes, til it have wrought, & cast up aloft all his Waxes, which you must often scum off with a little Riche: but in many places they are not so curious, but tumble all together, & so sel it grosse as it is. The best Hony is alwaies in the bottome, as the best Oyle aloft, and the best Wine in the midst.

The best Honie was in the olde time thought to be in Athens. The best Honie. and in Sicill: it is now thought very good that commeth from Moscouia, and the North-east Regions. The Honey at the beginning is thin as water, and after the straining, it worketh like new Wine, and purgeth : at the twentieth day, it waxeth thicke, and afterwards is covered with a thin rine, or filme, where the froth of the purging is gathered together. The best Hony, and least infected, the Bees doe gather from the leaves of the Oke, the Lind tree, and the Ald. There is thre sorts of Hony, the best kind is that which is called Authim, or flowre.



Three sorts  
of Hony.

Bread cor-  
rupteth  
Hony.

The ma-  
king of  
Waxe.

The age of  
Bees.

**flowre-hony**, made in the Spring time: the next, is **Summer-hony**, or **hasty-hony**, made in thirty dayes after the tenth of June when the Dogge begins to come in: the third is **Heath-hony**, a wilde kinde of hony, and not allowed, being gathered after the first Showrs of Autumne, while the heath is flowred: therefore like the **Sandy hony**. The best hony (as Diophanes saith) is cleare, yellowish, smooth in touching, and fine, roping, if it be drawen in length, & long sticking together, clammy, & hard to be got asunder: the hony that is of the worst making, is to be boiled. Bread, if it be dipped in it, doth straight corrupt it and therefore take heed you put it not where bread hath bene. The fragments of the Coame that hath once bin pressed, being taken out, heated & strained againe, do make a second Hony, which you must put up, and keepe by it selfe, for spoiling of the other. **Naughtie**, and counterfeit Hony is discerned by the burning, for ill hony burneth not cleare, as the said Diophanes witnesseth. The hysse that remaineth after the pressing, after that you have diligently washed it in sweet water, must be put in a brasse Caldron, & putting a little water thereto melted upon the fire, which when you have done, you must straine the Ware through a Sieve, or such like thing made of Straw, or Rushes: and after sceth it againe, and pouring it into some vessell with water, from whence you may easily take it, make it up in cakes, or what fashion you like. Pliny writeth, that the Coames must first be washed well, and afterward dried in the darke, for the space of three dayes, & the fourth day set upon the fire in a new earthen vessell, so as the Coames be covered with water, and then strained through a Sieve: last of all, boyled againe in the same vessell, and the same water, and poured into vessels with colde water, having their sidesointed with hony. The Ware will be very white after it hath stood in the Sunne, and bene twice sodden: you shall make it blacke with the Ashes of Paper, and being mingled with Vermillion, it will be red, and so otherwise coloured as you list.

Their age (they say) may thus be knownen. Such as are not above a yere olde, doe shine, & looke as they were newly oyled: the old ones be rough, shaggy, wrinkled, loathsome and ill favored to looke upon, howbeit, for making of Coames, these are the best. Aristotle in his booke before mentioned, affirmeth, that

Wax

Bees live five or seven yeeres, and that if a stocke continue nine or ten yeeres, the keeper of them hath good lucke. Pliny writeth, that one stocke was never seene to continue above ten yeeres, not though you supply the places of the dead every yeere with new: so commonly in the tenth yeere after the first dying, the whole stocke dieth. And therefore to avoide the mischiefe of being utterly destitute, it is good to encrease the number of your hives with new Swarmies every yeere. And if so be your Bees, through sudden storme, tempest, or cold, lie dead upon the ground, you must gather them together into a platter, or a broad bason, and lay them in your house toward the South, specially if the weather be good; after, cast amongst them Ashes of fig tree wood, being something more hot, then warme, shake them gently up & down, so as you touch them not with your handes, & so setting the into the Sun, they will (as Varro saith) quicken again. To whom Columella subscribing, addeth, that such Bees as you find dead under your hives, if you lay them up in a dry place all the Winter, & bring them out into the Sun in the Spring, when the weather is faire, and sprinkle them with the foresaid Ashes, they will recover within a few houres. They that list, may prove it. I have not hitherto tried it. Marcus Varro holdeth opinion, that Bees are ingendred sometime of other Bees, & sometimes of the body of a young Bullocke putrified, reciting this Epigramme of Archelaus.

To revive  
Bees that  
be dead,

Making of  
Bees.

Of Steere that strangled is are children strangely bred,  
Of Horse ingendred is the Waspes, and Bee of Bullocke dead.  
The Horses breed the VVaspes, the Bullocks breed the Bees,  
For a young Stee, or Steere, being strangled, corrupted, and cast into some such place, where the putrified vapour cannot breath out, and store of heards and flowers, agreeing with the nature of the Bees thrust into the body, as Time, Cassia, and such like, wherewith the vapour may be tempered, you shall hereof quickly have Bees, even as you may of the body of a horse likewise ordered, have Waspes and Hornets.

The manner how Bees are ingendred of a Bullocke, Virgill doth largely discourse out of Mago, and Deamberinus. You must frame a little house foursquare, about ten cubits in breadth, & as much in heigh, with some windowes, an every side one. A yong fat

Bees made  
of a Steere.

fat store being brought up hither, his Nose, his Eares, and all other open vents stopped, & filled with linnen dipped in Pitch, must be beaten with numbers of clubbes to death, so as both the bones and the flesh may be broken without any blood: for of the blood cometh the Bees. Afterward, the house being deepe strewed with Lime, & the Fullocke laid upon his backe, the doores and the windowes must be close shut up, & so plaistered, as there can no aire enter. Thye weekes after, the windowes must be opened on euery side, save where the winde bloweth strongest, & the light and the aire let in: when it hath bin wel cooled & refreshed, the windowes must be shut up again, & made as close as before: and being opened the eleventh day after, you shall find the house full of Bees, and nothing left of the Dre, save the hornes, the hayre, and the bones: they hold opinion besides, that the Kings are engendered of the braine, and the other Bees of the body.

Signes of  
sicknesse in  
Bees.

The signes and tokens of their health, as if they be lively, quicke, and many in number: if their workmanship be neatly and equally wrought: if they goe about their businesse cherefully, and if they looke faire and smooth. The signes of their not being in health, is, if they looke loathsomely, be rough & hazzie, except in the time of their labour, when they commonly looke like labourers, or be drowlie, or if you see them carrying out of dead carkasses, and following the corpses after the mourners, or that you heare no noyse, nor stirring amongst them. These signes when you see, Columella willethe you to give them meate in little troughes of Rades, specially Honie sodden, and ground with Galles, or Roses. You must also to heale them, perfume them with Galbanum, Storax and Beniamine, Reasins, or olde strigges of Grapes. If the King happen to bye, the common people waile and mourne with great heavinesse, neither will they make any provision for their owne sustentance: and therefore if you see them not, they will famish themselves.

The diseases of Bees,  
and the  
remedies.

They are many times infected with the Pestilence, against which you have no other remedie, then to sever the Hives farre asunder. Their chiefeest & early sickness, is in the beginning of the spring, when the Spurge and the Elm do both flower: for as upon new fruites, so at their first comming abroad, entised with these new flowers, being almost hunger staruen with the Winter

winter passed, they feed so greedily as they fall into a flir, where  
of if they be not quickly remedied, they die. For Spurge doth  
loose the bellies of all other creatures, but the slowes of Elme  
bringeth only the flire to the Bees. And therefore in such Coun-  
tries, where there is great plenty of these trees, the Bees continue  
but a while. Columella teacheth you against this disease, to  
give them Rosemary sodden with water and Honie: some a-  
gaine use to give them the scale of men, or Bullocks: as also  
the graines of the Pomegranate beaten, and sprinkled with  
wine or beasins, with the like quantitie of Spanna kneaded  
together, and given them in sharpe wine. boyled in an earthen  
vessel, & powdered into little Rodes. Virgill describeth an hearbe,  
called Aumellus, with a yellow stalk, and a purple flower, the  
iuyce of whose roote being sodden in old wine, and strained out  
is very good to be given them: Columella out of Higimus,  
teacheth to remedy them in this sort: First, to take out all the  
rotten and corrupt Combes, and to give them fresh meate and  
after to perfume them with smoke. It is good also to put to a de-  
cayed hive, a new swarme, as I said before. Many times they  
die of a disease which they call, The great devouring, which  
happeth when they have made so much ware, as they think they  
shall be able to fill, and afterwards, by storme & tempest, many  
of them be destroyed, so that the remaine sufficeth not to fill the  
Combes, whereby the emptie parts of the Combes becommeth  
rotten, and by little and little infecteth both the honie and the  
Bees: For which the onely remedie is, either to put in a new  
swarme to fill up the cells, or if you have no such swarmes, to  
cut away part of the Combes before they come to be naught,  
which you must do with a very sharpe knife, for feare of displa-  
cing the rest of the Combs. A cause beside many times of the  
death of the Bees, is their too much prosperitie, as when there  
are divers yeres great abundance of slowes, and the Bees so  
bustle in their feeding, that they forget their breeding, who over-  
wearying themselves with travaile, they die, not leaving any  
broode behinde them. It is called Blapfigonia, when either by  
sickness, slothfulness, or barrenness, they leave no fruit behinde  
them. To remedy this: It is good every third day, to shut up the  
hives close, leaving but very smal holes, out of which they cannot  
crape,

croape; so shall they be forced to looke to their hives, when as they cannot otherwise range abroad. Many times besides they are the cause of their own deaths, when perceiuing their Honie to go away, they fade too greedily. Their owne honey doth also many times destroy them: for being touched with it on the back, they are so limed, as they cannot stirre: and Bees doth not only kill Bees, but also all other like creatures, flies, & Wasps. They hate all filthy saouours, and sting such as smell of Oyntments: they are often besieged with Wasps, Hornets, & great Gnatters: the Swallow doth oftentimes spoile them: the Woodpecker doth with his long tongue, thrust into the hibe, lick up their honie: & diuers other Birds (as I haue said before) annoy them. The Wode bloweth them, and sucketh them up at their owne voyces, who sustaines no hurt by their sining. Whaepes are also hurtfull and troublesome to Bees, in whose places they tangle themselves, as they can hardly get out.

Concerning  
their hives.

In what soze they are to be dyven and gelded, it is shewed before: but at this time, & till the twelfth of September, the hives must be opened every tenth day, and smoked. The hives being thus smoked, you must refresh the Bees, with sprinkling & casting into the emptie parts of their hives, very fresh and cold water: and if any thing remaine, not washed away, you must sweepe it out with a Goose wing. Besides, the Botches, if they appeare, must be swept away, and the Butterflies killed, which dwelling in the hives, are commonly a bane to the Bees: for they both eat up the Ware, and with their dung doe breede a kinde of Worme that they call Hibe-moths. These Butterflies, as Columella teacheth, you may when the Pallow flowereth (at which time there is greatest number of them) destroy in this sort. You must have a vessell of brasse, very high & straight, narrow necked and mouthed, in the bottome whereof you must have a light, and set it in the evening nere unto your hives, and you shall see all the Butterflies straightwaies fall to the light, and while they play about the flame, they burne themselves, while they can neither get up, by reason of the straightnes, nor shun the fire, by means of the brasse walles. Betwixt the rising of the Dogge, and of the Beareward, which are almost stiffe daies, you must take good hiede your Bees be not spoiled by

To destroy  
Butterflies.

Hornets

Hornets, which at that time lie in waite for them, even at  
their owne dozes. After the rising of the Bearward, about the  
twelfth, or fourteenth of September, is the second harvest of  
your Honey: from that time, till the setting of the seven starres,  
which is about fortie dayes, the Bees do provide for their win-  
ter store, of the flowres of Heath, Tamariske, and other bushes  
and shrubs, of which provision you must take nothing, lest you  
discourage them, and drive them away: from the setting of the  
seven stars (which is about the entrance of November) the be-  
ginning (if we may believe <sup>Plinie</sup>) of winter, the Bees live all  
the winter long upon such store of Honey as they have laid up:  
at this time, the Hives must be opened and cleansed of whatso-  
ever filth is in them, and diligently dried; for during the winter  
time, your Hives must neither be opened nor stirred, and there-  
fore in the end of Summer, while the weather is yet milde and  
temperate, your Hives being made cleane in some sunny day,  
see that you thrust under them certaine close covers that may  
reach to the very bottome of the Coames, not leaving any void  
space, whereby the hibe shall be the warmer. When you have this  
done, close up every rift & open place with Clay, and Bullockes  
dung mingled together, saving it all over without, leaving  
onely a little hole to come in and out at. You must arme  
them also against the cold tempest, with good covertures of  
straw and Boughs. Some use to put in the hives small Birds  
being dyaen, which with their feathers keep the Bees warme  
all the winter, & therewith, if they happen to lacke food, they feed  
themselves sufficiently. When, it hath bene scene, they have so fed  
upon them, as they have left nothing but the bare bones: how-  
beit, as long as their honey sufficeth, they never meddle with the  
birds. It is very good and necessary (as I told you before) to set  
them meat in little Troughs or Vases, to defend themselves  
against famine. When Winter is past, in the space of forty  
dayes, they make an end of all their honey, except their Keeper  
deale the more liberally with them. It hath often also bene  
scene, that their Combes being emptye, they have continued  
fasting, till the Ides of Februarie, and cleaving to the Comber,  
as if they were dead, yet have retayned their life: but least  
they should lose it altogether, it is good to poyse them in

Not star-  
ring of Bees  
in Winter.

some

some sweete liquours by little pipes, whereby they may sustaine their liues, till the Swallowe with her appearing, promise a welcomer season.

After which time, when the weather will suffer them, they begin to soeke abroad for themselves; for after the Sunne is in the Equinoctiall, they neuer rest but trauell painefully every day and gather flowres, and necessaries for their breeding.

Beside, because few places are so fruitfull, as to yeld flowres both Summer and Winter: therefoze in such places, where after the Spring and Summer (at which times, both Beanes, Rapes, Willows, and other plants and hearbs, in every place do flowre) the flowres doe sayle, they are carried of diuers (and that in the night, as I told you before) into such places, where as there is good store of late flowring hearbs, as Lime, Wilde Marierum, and Sauerie, wherewith they may be fed, and gather food at their pleasure: and as Columella writeth, that Bees in the olde time, were brought from the fields of Achaia, to the pastures of Athens, and so transported in diuers other places. So may we with us carry them from places where the flowres be consumed in the Spring, to the Summer flowres, as Clober and such other: and after that, about the end of the Summer, to places furnished with Heath, Tamariske, and such other late bearing flowres. For the auoyding of this inconuenience of carrying from place to place, I will shew you in what sort I haue ordered my Bee-yard at home. And because Master Hersbach hath shewed you before in his Garden many good hearbes, and yet not whereto they serue, I will shew you a few plants, that I haue set about my Bees, seruing both for their commoditie, and the health of my household: I haue chosen of a great number, such as be most necessarie, and of greatest vertue: whose speciall vertues, and wonderfull workings, giuen onely by the most gracious and bountifull framer of the world, and being as it were sucked and drawne out by the carefull toyle and diligence of the Bee, must needs adde a greater perfection to their honie & their ware. I haue first enclosed the yard where my bees stand, with a Quickset-hedge made of Black-thorne and hony-suckle, the one seruing the Bees with his flowres at the beginning of Spring; & the other at the latter end of Summer. The first, the  
Black-thorne



Black-thorne beareth a pleasant white flowre, so much the wel-  
 comer to the Bees, as it is the very farewell of the winter: for  
 he commonly flowreth not till the winter be past. These flowres  
 newly gathered and steeped all a night in the best and strongest  
 wine, and afterwards distilled in Balneo Mariæ, being drunke,  
 helpeth any paine in the sides, as hath bene certainly proved.  
 Tragus the Germane confesseth, that with this onely water he  
 hath cured all maner of paines about the stomacke, heart, or  
 sides. Wine made of the Sloe, and preserved untill Iulie, or  
 August, when the bloody flur most raigneth, is a soveraigne  
 medicine against it. The other, the Hony-suckle, or the Woodbine, it be-  
 ginneth to flowre in June, and continueth with a pas-  
 sing sweet savour, till the very latter end of summer. The water  
 thereof distilled and drunke, two or three daies together at  
 times, allwageth the heate of the stomacke, helpeth the Cough,  
 and shortnes of breath. Rags of linnen dipped therein, and appli-  
 ed, doe heale any heate of the Eyes, or Throat. Next unto my  
 hives, I have planted the sweet hearbe Melissa, or Apiastrum, cal-  
 led in English, Balme; with a square Walke, a leafe like a  
 smooth Pettle, and a yellow flowre, & groweth almost in every  
 hedge, an hearbe wel knowne to the old women in the Country,  
 and greatly desired of the Bees. This Melissa, or Balme, sodden in  
 white Wine, & drunke two or three mornings together, purgeth  
 the brest, helps the short-winded, comforteth the heart, driveth  
 away the the dumpeish heavinesse, that proceedeth of Melancholy,  
 helpeth the falling-sicknesse, and almost all other diseases:  
 being chopped small, & steeped a night in good white wine, and  
 afterwards distilled, is greatly commended, not onely in deli-  
 vering Women from their pangs and griefes of the Bother,  
 being drunke to the quantitie of three or foure Spoonfulls, but  
 also cureth the paines or fainting of the heart, called common-  
 ly, The passion of the heart. Carduus greatly commendeth this  
 hearbe, for the comforting and renning of a decayed memory: &  
 affirmeth, that it is a cause of sweet and pleasant sleepes. Next  
 unto this have I growing that sweete and precious heard An-  
 gellica. This hearbe is in flowre, seed, leafe, stalk, & savour, so like  
 unto Louage, as they may hardly be discerned the one from the  
 other; the leafe both in a manner resemble the Fig leafe, saying

Blacke-  
thorne.

Woodbine.

Balme.

Angellica,

For want  
of Treacle,  
you may  
take the  
whole  
dramme,

Cardus  
Benedictus.

that it is more lagged, and indented round about. If any man  
b: suddenly infected with the pestilence, Fever, or immoderate  
sweat, let him take of the root of this Angellica in powder, halfe  
a dyar, and putting to it a dyamine of Treacle, mingle them  
together with thre or foure spoonesfulls of the water distilled of  
the said roote; and after he hath drunke it let him lie a id sweat,  
fasting for the space of thre houres at the least: this doing, by  
the help of God, he shall escape the danger: the roote steeped in  
Vinegar, and smelt unto, and the same Vinegar sometimes  
drunke fasting, both p:serue a man from the pestilence: to be  
shopt, the root and the water thereof, is soueraigne against all in-  
ward diseases, it scowreth away the collections of a Pleurisie  
beginning, helpeth Ulcered and corrupted Lungs, and is good  
against the Collicke, Strangurie, and restraint of Womens  
Purgations, and for any inward swelling, or inflammation: the  
iuyce thrust into a hollow tooth, asswageth the paine, the water  
dropped into the eare, doth the like: the said iuyce and water  
put into the eye, quickeneth the sight, and taketh away the thin  
skinnies and rines that covereth the eye. Besides, a most present  
remedy in all deeps and rotten sores, is the iuyce, the water or  
the powder: for it cleanseeth them, and covereth the bone with  
good flesh. It was called in the old time Panacea, or Healeal. Pert  
unto this Angellica, have I growing in great plenty, Cardus  
Benedictus, or blessed Thistle, which all Physitions do comend  
for sundry and great vertues, affirming that it was first sent out  
of India, to Fredericke the Emperoz, for the great vertue it had  
against the Headach, or Megrime, being eaten or drunken.  
Likewise, they say, it helpeth against the dazing, or giddinesse  
of the head, maketh a good memorie, and restozeth the hearing.  
For the p:ofe of his great force against poyson, they bring forth  
a young maiden of Pawy, that having unwaies eaten of a poy-  
soned Apple, and therewithall so swollen, as no Treacle, or  
medicine could cure her, was at the last refozod to health,  
by the distilled water of this Thistle: and likewise that a  
boy, into whose mouth as he slept in the field, happened an  
Adder to creepe, was saved by the drinking of this water,  
the Adder creeping out behinde, without any hurt to the  
childe. In fine they affirme, that the leaves, iuyce, seede,  
and

and water, healeth all kinde of poysons, and that the water hath  
healed a woman, whose breast was eaten with a Canker to the  
very ribbes. I have also set into this little peece of ground, great  
stoeze of the hearbe called *Namularia*, or *Penigrasse*, which creeps Penigrasse.  
peth close by the ground, having upon a long string little round  
leaves, standing directly one against the other, and a yellow  
flowze, like the *Crocus*. It is a soveraigne hearbe for hea-  
ling of wounds, not onely outward and greene wounds, but  
also inward sores and blcers, specially of the Lungs, whereof  
there hath bene good pwofe. *Tragus* affirmeth, that he hath  
sene dangerous and desperate wounds cured with this hearbe,  
being boyled with Hony and Wine, and drunke. It healeth  
erulcerations of the Breast and Lungs, and may be well given  
to those that Cough, and are short breathed, and to little children  
diseased with the drye Cough, who by reason of their tender age  
may take no stronger medicine. I have sene good plentie of  
it growing by the shadowie ditches, about great *Deckham* in  
Kent. I have beside there growing, *Scabious*, an hearbe that Scabious.  
groweth commonly in Cozne, with a jagged lease, lying round  
upon the ground, and thrusting out in Summer a long stalk,  
with sundry branches, the flowze growing in blew knobs, or  
tustes, like hony Combes. This hearbe being sodden with  
Wine, and drunke, doth helpe the *Pleurisie*, against which  
diseases, the women of the countrey, that many times take  
upon them to be great Doctresses in Physicke, doe still the  
water thereof in May, and give it to be drunke at each time,  
two or three spoonfulls, not onely against the *Pleurisie*, but a-  
gainst inward impostumes, Coughes, and all diseases of the  
breast. Against impostumes, divers (as *Tragus* writeth) doe  
make this composition, they take a handfull of *Scabious*, the  
hearbe dried, of *Liquetisse* cut small an ounce, twelve figges,  
fenell seed an ounce, Anised as much, Oras halfe an ounce:  
these they lay a night in water: the next day they boile them, til  
a third part be consumed, and after making it sweet with  
Sugar, or Hony of Roses, they give it warme in the Morn-  
ning and Evening: wherewith they say, the impostume is  
ripened, made soft, and coughed out.

It is called of some *Feucium*, & *Veronica*, as it is supposed of *Veronica*.

a certaine French King who was thought by the iuyce thereof, to be cured of a great Leprosie, it is called in English *Filhellin*: it creeperh low by the ground, as *Penicraff*: both, e beareth a leafe like the *Blacke-thorne* with a blewish speckled flowre, with a seed inclosed in little potwches, like a shepheards purse, and groweth commonly under Oakes. D. Hieron writeth, that the force thereof, is marueilous against the Pestilence, and contagious ayres, and that he himselfe hath oftentimes proved. The water of the hearbe scraped in white Wine and distilled, therewithall he hath cured sundry times, hot burning and pestilent feavers, as well in young men, as in olde. Hieron *Tran-schweyg*, commended it to be singular good for all diseases of the *Splene*: the shepheards of *Germanie* give it with great profit made in powder, and mingled with Salt, to their *Cattell* diseased with the Cough: being scraped in Wine and distilled, it is a most present remedie in all pestilent feavers: being given two ounces thereof with a little Treacle, and after laid warme in bed, and well covered, it expelleth the poison by sweat, and driueth it from the heart. The water of this hearbe taken certaine daies together, two ounces at a time, helpeth the turn-sick giddinesse of the head, voideth steame, purgeth blond, warmeth the stomack, openeth & stopping of the *Liver*, healeth the diseases of the *Lungs*, and *Splene*, purgeth the *Veines*, the *Matrice*, and the *Bladder*, it driueth out sweat and venome, helpeth the *Fandise*, the stone of the *Veines*, and other grieuous diseases.

*Cariphilata*. You shall also haue amongst these plants of mine, the good sweet hearbe *Cariphilata*, or of some *Benedicta*: of others *Sana-manda*, called in English *Aven*, whose roots whether it be græne, or olde, resembleth the *Globe* in saour: the leafe is jagged, rough, of a darkish græne, and not much unlike to *Agrimony*: the flowre is yellow, and after the falling thereof, leaueh a prickly knoppe like a *Hedge-hogge*: the roote the longer it hath growen, the sweeter it is: the speciall use of this roote in some countries, is to be put in Wine in the Spring time: for it maketh the Wine to taske and saour very pleasantly: which Wine, as many hold opinion, doth glad the heart, openeth the obstruction of the *Liver*, and healeth the stomacke

stomache that is oberburdened with cold and grosse humours :  
 this roote boyled in Wine & given warme, both cease the grieve  
 of the stomache, or the belly, proceeding of either cold, or winde.  
 Ward by this hearbe, have I planted the great water Betony, Water Be-  
tony.  
 called of some Ocimistrum, of Mathiolus, Scrophularia Maior :  
 it hath a great square stalk, and big lease indented round about:  
 the flowre is in colour Purple, and in fashion like the shell of a  
 snail; it flowreth in June and July, and groweth most by  
 waters in shadowie places. Tragus teacheth to make a speciall  
 oymntment therof, serving against all Scabbes and sores, where  
 with he saith, he hath seene people so mangy & they have seemed  
 even Lepers, to be cured: his oymntment is this, take the hearbe,  
 rootes, and all, gathered in May, washed and well cleansed from  
 all filth, stampe it, and straine out the iuyce, & keepe it in a nar-  
 row mouthed Glasse well stopped, where in you may keepe it a  
 whole yeere, and whensoever you list to make your oymntment,  
 take of the same iuyce, of Ware, and Oyle, of each a like quan-  
 tity, & boile them together upon a Chafindish of coales, stirring  
 them well, till they be incorporated, and so use it. Mathiolus tea-  
 cheth to make a singular oymntment therof against Kernels, the  
 Kings evil, and the Hemerodes: his order is this. You must ga-  
 ther the rootes in the end of Summer, and after that you have  
 made them very cleane, stampe them together with fresh Butter  
 & putting them into an earthen vessel close covered, set them up  
 in some moyst and dampish place, suffering it there to remaine  
 for the space of fiftene dayes: afterwards, let the same Butter  
 be melted with a soft fire, and being well strained, lay it up  
 for your use. There have I also another excellent hearbe,  
 called in Latine Cardiaea, I know no name for it in English,  
 except you will call it Motherwort: & indeed it is the very true  
 Motherwort; it groweth by high waies, and nere to stone wals,  
 it hath a lease something like a Pettie, but more indented, the  
 leaves next to the roote being iagged like the Crookate: it  
 groweth bushing with many stalkes, I have seene it plentifully  
 in Surry, and some stoe of it about Maidstone in Kent: it is of  
 great force against any sicknesse of the heart, whereof it taketh  
 his name: it helpeth Crampes, and Palsies, it cleanseth the  
 breast from steame, it killeth Wormes in the body, openeth  
 obstructions,

struitions, pꝛoboketh vyne, and Womens courses: being made in powder, and a spoonefull of it given in Wine, it wonderfully helpeth the hard labours of Women.

Whosoever is troubled with breaking of winde, and weaknesse of stomacke, and those whose stomacks retaine not their meate, or whosoever feels slowe belching from their stomacks, and is therewith often troubled, let them continually use Betony, either the hearbe or slowe boyled in Wine, or the water distilled, or the Conserue (as they call it) of the slowes. And if so be you lacke the Conserue, or the water, you may use the drie hearbe in powder, either by it selfe, or with hony: women that are troubled with the Mother, may use this hearbe for their remedie. To be short, the slowe, leafe, and roote of Betony sodden and drunke, or howsoever you wil, in Electuarie, Conserue, Syrop, Potion, or Powder, as you list to take it, is singular good in the diseases of the Stomacke, Liver, Spleene, Kidnies, and Bladder, it scatch the Matrice from obstruction, and draweth thence all hurtfull moistures. For consumptions of the Lungs, Coughes, Dropsies, continuall and putrified Fevers, proceeding from the Stomacke, boyle the leaves and slowes of Betony in honied water, and you shall have present helpe. Thus have I shewed you what kinde of hearbes I have planted about my Vases, to the end they should have sode at hand of the sweetest, and the wholesomest: I have shewed you also the vertues of the hearbe, the slowe, and the water, that you may use it for your own commoditie: onely this warning I give you, that you doe not distill them, as the unskillfull doe, in Skilles of Lead, Tinne, and Brasse, which poisoneth and spoileth the water, but in Glasse Stills; set in some vessell of water upon the fire, whereby your water shall be most perfect and wholesome. The difference of these two distillings, appeareth plaine: for example in Wormewood, which if you distil in your comon Stillateries the water cometh out sweet, having gotten a corrupt quality by the nature and corruption of the Pettall: whereas, if you doe it in Stills made of Glasse, looking that the Glasse be well closed round about, your water shall have the very taste, savour, & property

perty of the Hearbe. With these Glasse Hills you may so order  
your fire, as you may draw out of every hearbe, the Water,  
Spirits, Oyle, and Salt, to the great comfort of sick and disea-  
sed persons. I set besides great plenty of Saffron, Yeath, Ma-  
mariske, and without the Weard, Rhome, in whole flowers  
the Bee much delighteth.

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**FINIS.**

*Soli Deo honor & gloria.*

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Olde English Rules, for  
purchasing Land.

*Who so will be wise in purchasing,  
Let him consider these points following.*

First, see that the Land be cleare,  
In title of the seller.  
And that it stand in danger  
Of no womans Dowrie.  
See whether the Tenure be bond or free,  
And release of every feoffee.  
See that the seller be of age,  
And that it lie not in mortgage.  
Whether a taile be thereof found,  
And whether it stand in statute bound.  
Consider what service longeth thereto,  
And what quitrent thereout must goe.  
And if it be come of a wedded woman,  
Thinke thou then on covert baron.  
And if thou may in any wise,  
Make thy Charter with warrantise,  
To thee, thine heyres, assignes also,  
Thus should a wise purchaser doe.

F I N I S.

